FE7'56

SOAP

and Chemical Specialties

his issue...

otlight on automation soap industry meeting

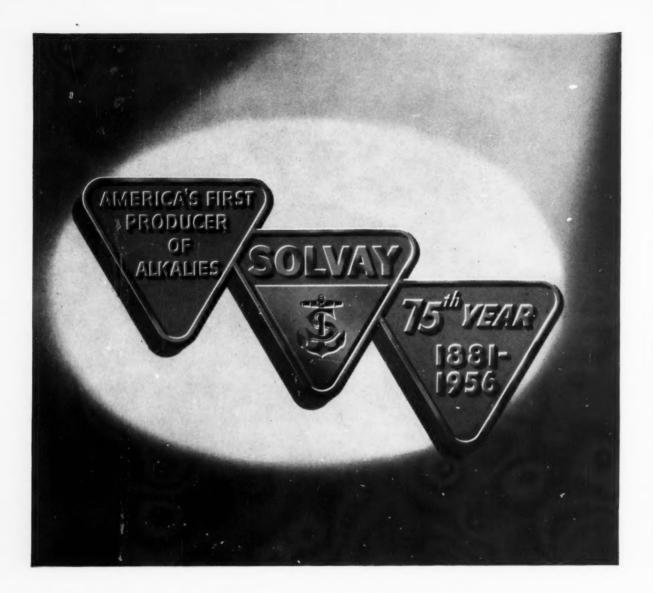
odern wax formulations Il for more synthetics

tergent spot removers new washable fabrics

rethrum makes comeback ith 1956 supply adequate

over photo . . . Dr. E. G. Klarann, vice-president and technical vices manager of Lehn & Fink oducts Corp., New York, and wly elected president of the Chemal Specialties Manufacturers Assn.





SOLVAY'S 75th YEAR

As America's pioneer producer of alkalies, we are proud of the contributions Solvay has made to the dynamic growth of American Industry during the past 75 years.

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To compose a classic, you need more than common scents

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Use the good scents Norda makes, because common scents will not sell your soap. Use the nose of Norda, to compose all their characteristics into that subtly right fragrance.

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JANUARY, 1956

3



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Volume XXXII, No. 1

Tamuary, 1956

SOAP

and Chemical Specialties

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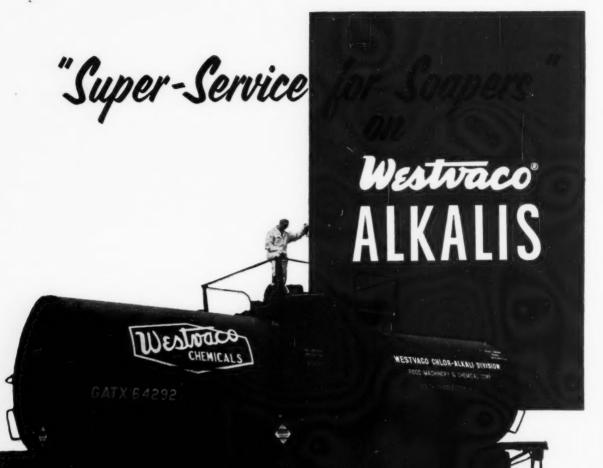
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|-----------------------------------|-------------|------------|
| Titre | 8° - 10°C. | 3°C. max. |
| Cloud Point | 46° — 49°F. | 38°F. max. |
| Color 1" Lovibond Red | 2 max. | 2 max. |
| Color 1" Lovibond Yellow | 15 max. | 15 max. |
| Unsaponifiable | 1.5% max. | 1.5% max. |
| Saponification Value | 198 — 203 | 198 203 |
| Acid Value | 197 — 202 | 197 — 202 |
| % F.F.A. as Oleic Acid | 99 min. | 99 min. |
| Iodine Value (WIJS) | 93 max. | 96 max. |
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JANUARY, 1956

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A GUIDE TO WAX PRODUCTS PURCHASING FOR PRIVATE BRAND RESALE

SELF POLISHING WAXES

Candy's Supreme (standard) Bright Beauty (standard) Candy's Supreme Special WR

SUPER CAND-DOX

CAND-DOX #CS CAND-DOX #BB

Six floor waxes that are all-around top quality for any given traffic condition. Each imparts the finest protection and beauty to floors for which they are best suited.

Bright Beauty WAX REMOVER & All-Purpose SURFACE CLEANER

Properly used it will remove water-emulsion wax from any floor without harmful effects to floor or floor coloring. It is the perfect floor maintenance wax remover and all purpose surface cleaner. Pleasant odor, crystal clear and thorough cleaning action with all types of equipment. Is unaffected by hard freezing. Furnished ready for resale or in concentrated form for those who want to compound their own cleaner . . . nothing but water to buy or mix in.

Bright Beauty CREAM FURNITURE POLISH

A cream furniture polish that spreads easily, polishes without excessive effort and imparts a deep impressive lustre. Too, it permits repeated repolishing with a dry cloth saving reapplication time and again; truly a very economical polish of very highest quality.

Bright Beauty PASTE WAX

A paste wax that is properly blended and refined from excellent quality solids and solvents that produce the best drying time and thorough evaporation. A wax that is easy to handle, having "creamy" consistency and stability throughout its stocking and usage period.

Bright Beauty LIQUID (spirit) PREPARED WAXES

Complete line of spirit dissolved waxes that meet a wide variety of demands for durability, color and types of usages. Each its own "Dry Cleaner," they keep a surface waxed with a superb protective coating necessary to many difficult surfaces such as certain floors (where adaptable), bars, wallpaper, etc.

Bright Beauty GLASS POLISH & CLEANER and SILVER POLISH

As a Glass Cleaner (pink color) it applies evenly with little effort, wipes off easily with negligible "powdering" and produces an undeniable "feel" of cleanness to glass that is actually true in fact. Different in color only as Silver polish, it imparts a highly desirable lustre to all silver without abrasion and can even correct the abuses of scratchy, "quick-polish" inferior products.

Bright Beauty DANCE FLOOR WAX

Basic advantages are freedom from "balling up," thus does not gather dirt and impregnate the floor with hard spots difficult to remove...also is free from dusty effects. Adds the protective quality to expensive ballroom floors that means more "floor-years" to users everywhere.

Bright Beauty Heavy Duty PASTE CLEANER

Really cleans and scours more effectively and quicker than most scouring powders. Depending on application, it can clean to perfection even painted walls to provide a suitable repainting surface. 100% active, free from excessive abrasive quality, it frees almost every surface from all forms of foreign matter to perfection. An honest appraisal of floor wax products as we see it is offered to guide was buyers who want the best quality money can buy...

1. BEAUTY AND DURABILITY

should be considered together. Initial appearant is important, but for a waxed surface to reme beautiful it must be durable. Durability dependent only on resistance to the abrasion of trafficulation of dirt and to discoloring traffic marks. Durabilities really measured by how long the waxed surface maintains a nice appearance before the necessity of complete removal and re-waxing.

2. ANTI SLIP

qualities are necessary in a good wax as a mater of safety underfoot. This important qualities of safety underfoot. This important qualities of safety and protection which are the forement original reasons for the use of a wax. Look for the proper balance—a wax film which is not excessively slippery yet which is not tacky and does not excessively collect dirt.

3. WATER RESISTANCE

is important, particularly when considering the possibility of wet traffic and the necessity for frequent damp mopping for the purpose of moving surface dirt. Overdoing this quality mean greater difficulty in applying multiple coats of wax and may seriously increase the difficulty in removal when complete cleaning and re-waxing is necessary. Water resistance is important, but so is the quality of removability.

4. SOLID CONTENT

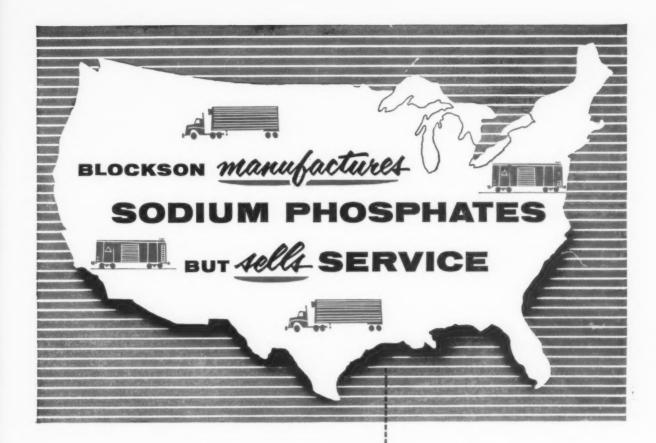
when expressed in percentage is not nearly a important as the quality of the solid content. When considering good quality, 12% of solid enswers most needs for good planned maintenance programs. Two applications of 12% will give better results than one of 18%. However the more concentrated material is useful for some programs of maintenance and particularly of "washed-out" floors, etc. Over-waxing should be avoided so that periodic complete removal will not be too difficult.

5. CARNAUBA WAX

is still the most important basic ingredient in outfloor waxes. When refined and compounded will other important ingredients and "KNOW HOW. It aids materially in producing the most important features of a good floor wax... ALL AROUN QUALITY OF PERFORMANCE.

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Our products are available for private brand resale and are sold only through Distributors except for experimental accounts in Chicago essential to research. Candy & Company, Inc.
2515 W. 35th St., CHICAGO



THERE is a reason for the very substantial tonnage of sodium phosphates Blockson ships to industrial areas far from our greatly expanded plant facilities here in Joliet. That reason is continuous prompt shipment—a few bags or many carloads—minus the red tape usually associated with an operation as large as ours.

Again and again customers tell us they couldn't get better service if our plant were located in their own industrial community.

There is a reason for that, too. At Blockson, production and sales are so closely coordinated that a single collect phone call is all that is required to expedite your unforeseen needs and get your sodium phosphates en route the very same day if it is humanly possible, and most frequently it is.

We welcome the responsibility of functioning as an arm of our customers' production setup, minimizing their inventory and warehousing expense, timing and dovetailing dependable shipments with their own processing operations and at all times providing a uniform and dependable competitively priced product—readily available in your required granulations and specifications.

The new Blockson catalog and handbook is yours for the asking.

BLOCKSON CHEMICAL COMPANY

Division of Olin Mathieson Chemical Corporation

Joliet, Illinois

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- Trisodium Phosphate
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- Sodium Polyphos
 (SODIUM HEXAMETAPHOSPHATE)
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- Sodium Acid Pyrophosphate
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 ANHYDROUS CRYSTALLINE
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- · Sulfuric Acid
- · Sodium Fluoride
- · Sodium Silicofluoride
- · Hygrade Fertilizer
- Teax® 120
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Another reason why Armour is your one best source for fatty acids

Armour Oleics

rank highest in

oxidation

stability—

here's Mackey

test proof!



According to laboratory tests Armour White Oleic has 42.8% greater oxidation stability than the next best brand of oleic. After 5 hrs., 15 min. the cotton with Armour low titer White Oleic shows no oxidation. The other passed the point of internal combustion and charred. In this same test, five brands of white oleics reached 105° C. in an average of 4 hr., 2 min. The cotton soaked with Armour White Oleic remained stable for 7 hrs., 30 min.

| No. of hrs. to reach 105° C. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
|---------------------------------|------------------------|---|--------|--------|---|--------|--------|---|
| Armour low titer white oleic | A-1-12 | | | | | | | |
| Brand "A" white oleic | Company of the Company | | | | | | | |
| Brand "B" white oleic | 47 A 44 A | | | | | | | |
| Brand "C" white oleic | Princeto d | | | | | | | |
| Brand "D" | | | | | | | | |
| Brand "E" | | | \neg | \neg | | \neg | \neg | П |

Armour White Oleic resists oxidation in Mackey Test 2 hours and 15 minutes longer than nearest competitive white oleic.

Whether you use white Otelos or red oils, low titer or high, Armour Oleics offer the greatest resistance to oxidation. In cosmetics and soaps, this greater stability means your products will store longer, look and smell fresher in use. In lubricating, scouring or finishing textiles, this also means Armour Oleics withstand high temperature processing. And your textiles won't develop unpleasant odors. These oleics have low pour point, low unsaponifiable and high oleic content.

Only Armour uses fractional distillation and solvent crystallization to produce a complete line of fatty acids—yet you pay no premium in price! Advantages such as these make Armour your one best source for fatty acids. For information and samples, simply write us listing your specifications.



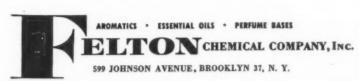
ARMOUR CHEMICAL DIVISION

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Modern detergents present special scenting problems which have received careful technical attention from Felton Chemists.

Using ordinary oils to perfume a detergent is like sending a boy to do a man's job. As a result of applied research and innumerable tests with every type of detergent, Felton is able to offer the manufacturer highly dependable perfume oils that simply won't whiten-out.



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Tell us about your detergent product and its use; we will be very glad to send you suitable perfume samples.

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| City | | Zo | ne State | | |



"RINSE-ADE", a CMC-based product of Frontier Alkali Corp., Buffalo, N.Y., keeps soil in suspension, rinses fast, and saves hot water.

in Commercial Laundry Preparations THE KEY IS CMC

Commercial laundry preparations, as well as detergents and soap for home use, get clothes whiter, faster when they include Hercules® CMC in the formulation.

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intermediate for synthetic detergents

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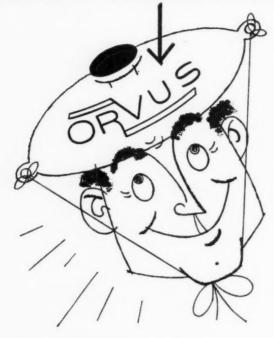
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NO MIXING "HEADACHES"



WHEN YOU'RE
USING
ORVUS
AB GRANULES!*

*An unusually efficient synthetic detergent of the alkyl aryl sulfonate type.

What's more irritating—or costly—than a detergent which breaks down and turns to dust when you start mixing it with other ingredients? Or that insists on layering, sifting, or settling out?

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America's largest manufacturers of soaps and synthetic detergents.



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Now available at a practical price, Solvay Mercury Cell Caustic Potash is unmatched in quality. It has set new standards for whiteness and purity with only *trace* quantities of metals and chloride—and is *chlorate-free*.

Solvay Mercury Cell Caustic Potash is available in both liquid and dry forms—in any quantity from single drums to carloads. Investigate this super-quality material—it costs less than you think. We will be glad to supply you with samples and prices.

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LOW DENSITY

D-40

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D-40 SF is readily soluble in hard or soft water, either hot or cold. It's free-flowing,

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Packaged in either 70 lb. bags or 170 lb. drums for easy handling. Compare D-40 SF with the product you are now using. Just contact the Oronite office nearest you for samples and complete information.



D-40sF Showing bulk density of D-40 SF flakes— Oranite's alkyl aryl sulfonate.



BRAND X Showing bulk density of a typical competitive alkyl aryl sulfonate.



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350





After Closing...

Barr Appoints Foster

Gerald G. Foster has joined G. Barr and Co., Chicago, aerosol filler, as manager of the firm's new



Gerald G. Foster

Los Angeles plant, it recently was announced by George Barr, president. Mr. Foster will supervise the production of pressure-packaging and the operations of the quality control laboratory in the Los Angeles branch. He previously had been a consultant in the areosol industry. G. Barr and Co., a leading manufacturer of non-food aerosols, is said to be the first aerosol firm to operate plants on both coasts and in the midwest.

Walsh Leaves Rochester

Joseph A. Walsh, vice-president in charge of the wholesale division of the Rochester Germicide Co., Rochester, N.Y., recently resigned from the company. He had been with Rochester for 21 years and prior to that time for five years with C. B. Dolge Co., Westport, Conn. For 20 years, he was in charge of the New York Branch for Rochester Germicide.

Mr. Walsh is the son of the late Patrick J. Walsh, who was president of the old Phinotas Chemical Co., New York. Phinotas was one of the original American manufacturers of larvaecides, disinfectants and insecticides. The company supplied larvaecide to the U.S. Army which was used in mosquito control in the building of the Panama Canal.

Lueders Not for Sale

F. J. Lueders, president of George Lueders & Co., New York, recently denied that the company is for sale. A rumor to this effect has again become persistent, according to Mr. Lueders, who states he "emphatically denies any such intention." He also claims that the company's "business continues to be very good."

EOA Meets, Elects Coutin

The annual meeting and dinner of the Essential Oil Association of the U.S. was held at the Savoy-Plaza Hotel, New York, Jan. 6. Pierre J. Coutin of Ph. Chaleyer, Inc., New York, was elected president to succeed Louis Gampert of Felton Chemical Co., Brooklyn. Other officers elected include: vice-president, Gert Keller, Schimmel & Co., New York; secretary, Frank Dittrich, Ungerer & Co., New York. Named to the executive committee were Louis

Pierre J. Coutin



Gampert; R. E. Horsey of Givaudan-Delawanna. Inc., New York; M. Lemmermeyer, Aromatic Products, Inc., New York; R. A. Engle, Trubek Laboratories, Inc., E. Rutherford, N.J., and F. J. Lueders, George Lueders & Co., New York.

Wardell Sandoz Ad Head

Sandoz Chemical Works, Inc., New York, has appointed



Dwight L. Wardell

Dwight L. Wardell as advertising manager, it was announced recently by A. T. Hanes, vice-president of the firm. Messrs. Wardell and Hanes will work closely together to promote Sandoz dyestuffs and chemicals to the rug, textile, paper, leather and aluminum industries.

Andrews Gen. Mills V. P.

The appointment of Sewall D. Andrews, Jr., general manager of the firm's soybean division, as a vice-president of General Mills, Inc., Minneapolis, was announced recently. He joined the company in 1930, later the same year transferring to the purchasing department. He became director of purchases in 1937. From 1943 until 1945 he served with the U.S. Army, holding the rank of lieutenant colonel. Upon his return to General Mills, Mr. Andrews joined the chemical division. He became director of sales in 1946 and general manager of the division in 1953. Since Octtober, 1955, he has served in his present position as general manager of the soybean division.

Pete Niles Honored

Pete Niles, Chicago manager of Fritzsche Brothers, Inc., New York, became the 50th active mem-



Peter Niles at his desk in Chicago with congratulatory messages and gifts.

ber of the firm's Quarter-of-a-Century Club, it was announced recently. He was honored by the entire Chicago staff at a banquet where he received a gold watch from his co-workers and a substantial government bond from the officers and directors of the company.

Hercules Changes

The appointment of Donald H. Sheffield as assistant general manager of the synthetics department of Hercules Powder Co., Wilmington, Del., and the opening of a new branch sales office in Albany, N. Y., for the department were announced recently.

At the same time the company announced that Dr. R. Stanley George has been named manager of the oxychemicals division of Hercules' Naval Stores Department, succeeding Mr. Sheffield; Paul L. Johnstone has been named director of development for the company's cellulose products department; Dr. Harvey J. Taufen was named director of development for the synthetics department, succeeding Mr. Johnstone; and C. D. Ender was named to succeed Dr. George as director of development for Naval Stores.

Other Hercules changes announced at the same time include the appointment of Dr. R. W. Ivett as manager of associated research divisions, Hercules experiment station, to succeed Mr. Ender; Dr. Ernest Turfk to succeed Dr. Ivett as manager of the Naval Stores Division, and Dr. Alfred A. Albert to succeed Mr. Taufen as manager of the synthetics research division.

──★── New Monsanto HQ Building

Monsanto Chemical Co., St. Louis, Mo., announced early this month plans for the construction of new general headquarters buildings on a 252-acre tract in St. Louis County. Plans call for three almost identical office buildings, an executive building, and a utility building, all scheduled for completition in late 1957. The new facilities will provide about 300,000 square feet of floor space. No manufacturing facilities are ever contemplated at this site.

Construction will be started at the same time on a laboratory building at the Creve Coeur location for the research department of Monsanto's inorganic chemicals division. This research center will permit centralization of personnel and activities now located at Dayton, Ohio, and Everett, Mass.

- * -

Koppers Names Wright

The appointment of L. H. Wright as manager of retail product sales of the Tar Products Division of Koppers Co., Pittsburgh, was announced recently by R. R. Holmes, vice-president and general manager of the division. Mr. Wright, formerly assistant manager, retail product sales, succeeds E. W. Van der Wolk, who retired after 34 years with the company.

R. E. Babcock, who has been a retail products field salesman for the past 14 years, fills the position formerly held by Mr. Wright.

Mr. Wright joined Koppers in 1922, and has a background of 32 years with the company, including 25 years of sales work.

Mr. Van der Wolk started in 1920 with White Tar Co., which Koppers acquired in 1929. He entered the sales field in 1934, after 14 years in laboratory and plant work.

Hooker Advances Wilkin

Robert E. Wilkin has been elected a director and named vicepresident and director of sales of



Robert E. Wilkin

Hooker Electrochemical Co., Niagara Falls, N. Y., it recently was announced by Robert Lindley Murray, chairman of the board. Mr. Wilkin was formerly vice-president and general sales manager. He joined Hooker in 1936 as sales manager of fine chemicals and was successively named assistant sales manager in 1949, general sales manager in 1949 and vice-president and general sales manager in 1953.

New Miller Absorbent

Frank Miller & Sons, Inc., Chicago, recently developed a new oil, grease and water absorbent that is said to be non-combustible and non-caking. The new product is a granular compound that comes packed in 50 pound bags. It also is said to provide a non-skid surface when it is sprinkled in thin layers over oily floors.

Rhodes in New Post

George H. Rhodes has joined Refined Products Corp., Lyndhurst, N. J., as sales representative for the central eastern states, it was announced last month by Ralph Zoccolillo, president. Mr. Rhodes will make his headquarters at Jenkintown, Pa. He was previously associated with Bersworth Chemical Co., later Versenes, Inc.

Lever Names Shorey

The appointment of Roy V. Shorey as personnel director of Lever Brothers Co., New York,



Roy V. Shorey

was announced recently by E. Lee Talman, administrative vice-president. He succeeds G. F. Gamber, who resigned to accept a position with another industrial firm.

Mr. Shorey joined Lever Brothers in 1940. Prior to his present position, he was in charge of personnel for all Lever plants. He previously served as wage administrator and as industrial relations manager at the company's Hammond, Ind., plant.

Mr. Shorey is succeeded by William H. Briska, Jr., industrial relations manager at the company's Hammond plant. Mr. Briska's previous experience includes personnel manager for the Pepsodent division, and as industrial relations manager at the company's Cambridge plant.

Columbia-So. Changes

Columbia-Southern Chemical Corp., Pittsburgh, has appointed Chris F. Bingham as vice-president of sales to succeed W. I. Galliher, who recently announced his retirement as vice-president and director of the firm. Other executive changes made by Columbia-Southern include the appointments of H. W. Gleichert as vice-president of market research and development; W. F. Newton as director of sales; and P. A. Fodor, Jr., as assistant director of sales.

Mr. Bingham first joined

Columbia-Southern in 1940 as a technical service engineer. In 1945 he transferred from the Philadelphia office to Pittsburgh as manager of pigment sales and in 1952 was named assistant director of sales. He had served as director of sales since 1953.

Perfume Symposium

An open symposium on various methods of pre-market testing perfumes will be held by the American Society of Perfumers at the Essex House, New York, on Wednesday, March 21, it was announced recently by Everett D. Kilmer, committee chairman for the meeting.

The symposium will feature a discussion between market research experts and perfume and toiletry manufacturers on determining consumer acceptability in the fragrance field. Another part of the program will be devoted to the presentation of studies on the psychological influence of perfumes.

A cocktail hour and dinner will follow the meeting. In addition to Mr. Kilmer, committee members include Pierre Bouillette, Andrew Farago, Oliver Marton, Ernest Shiftan and Christian Wight.

New R. C. Catalog

A new illustrated catalog was issued recently by R. C. Can Co., St. Louis, that provides information on the shape, construction and labeling of fibre cans, tubes and cases. A section of the catalog lists specialty items designed for special problems and products. Among these containers is a new insecticide package. Copies of this catalog are available on request to R. C. Can Co., 9430 Page Blvd., St. Louis 14.

Turco-Dow Joint Process

Turco Products, Inc., Los Angeles, and Dow Chemical Co., Midland, Mich., are jointly developing a new process for the chemical milling of magnesium under a two year agreement, it was announced last month. The process will be licensed by Turco.

Wirwille Joins Velsicol

James Wirwille has been appointed to the agricultural chemicals sales staff of Velsicol



James Wirwille

Chemical Corp., Chicago, it was announced recently by John F. Kirk, vice-president in charge of sales. Mr. Wirwille will represent Velsicol products in Ohio, Michigan, Kentucky, West Virginia, Western New York and Eastern Ontario in Canada. He previously served as technical sales representative for the agricultural chemicals division of Pennsylvania Salt Manufacturing Co., Philadelphia. Prior to that Mr. Wirwille was on the staff of the U.S. Department of Agriculture at the Beltsville, Md., research center.

Atlas to Buy Aquaness

The acquisition of Aquaness Corp., Houston, Tex., by Atlas Powder Co., Wilmington, Del., has been approved by the directors of Atlas, it was announced Jan. 9 by Ralph K. Gottshall, president of Atlas. Aquaness produces petroleum dehydrating compounds, corrosion inhibitors, bactericides and other chemicals used in the petroleum industry. The Aquaness plant in Houston is equipped with oxidation, oxyalkylation and esterification units, amine and amine salt reactors and blending equipment.

Atlas research and development facilities, Mr. Gottshall said, would supplement the production and sales position which Aquaness has established in the petroleum industry. It will also give Atlas a plant location closer to the major point of use of petroleum industry products.

W. J. Murphy Dies

William J. Murphy, 60, vicepresident in charge of sales and a director of American Potash & Chemical Corp., Los Angeles, died of a heart attack recently, in Glen Ridge (N. J.) Hospital.

Mr. Murphy joined one of the predecessor companies of American Potash in 1911. In 1919 he was transferred to the main plant of American Potash in Trona, Calif. Later he returned to the company's sales department in New York. Mr. Murphy became general sales manager in 1934 and vice-president in charge of sales in 1941. He was elected to the board of directors in 1947.

Francis to Head Sales

American Potash & Chemical Corp., Los Angeles, has advanced W. J. F. Francis to vice-president in charge of sales, it was announced recently by Peter Colefax, president. Mr. Francis first joined the firm in 1952 as general sales manager in charge of western activities. He previously had been associated with Pennsylvania Salt Manufacturing Co., Tacoma, Wash., and California Spray-Chemical Corp., Richmond, Calif.

New Fuld Finish

A new floor finish that is said to act as a fungicide, bacteriostat and sanitizer was introduced recently by Fuld Brothers, Inc., Baltimore. Called "Just Flexible Film Floor Finish," the product will be marketed through Associated Just Distributors, Inc.

— ★ — Willenbucher in New Post

Roland F. Willenbucher has been appointed manager of purchases and traffic for National Aniline Division, Allied Chemical & Dye Corp., New York, it was announced recently by M. A. Conner, vice president of the division.

ASSCI to Honor Murray

Robert Lindley Murray, chairman of the board of directors and chief executive officer of



Robert L. Murray

Hooker Electrochemical Co., Niagara Falls, N. Y., will receive the Chemical Industry Medal for 1956 at a meeting of the American Section of the Society of Chemical Industry Medal for 1956 at a meeting of the American Section of the Society of Chemical Industry to be held at the Waldorf-Astoria Hotel, New York, on Friday evening, April 27. Mr. Murray will be awarded the medal for his "conspicuous services to applied chemistry."

The medal was established in 1933 and is awarded annually in recognition of outstanding accomplishment in applied chemistry. Mr. Murray was chosen by the executive committee of the Society for research, engineering, production and administration in the electrochemical industry and for his important contributions to the development of that industry.

--*-

Shea Appoints Vogel

Paul A. Vogel has been named as director of commercial research of Shea Chemical Corp., New York, it was announced recently by Vincent H. Shea, president. Mr. Vogel comes to Shea after five years as director of market research for the General Chemical Division and National Aniline Division of Allied Chemical and

Dye Corp., New York. Prior to 1950, he was associated with Emhart Manufacturing Co., Hartford, Conn., and E. I. du Pont de Nemours & Co., Wilmington, Del.

Pest Control Meetings

Three regional conferences are planned within the next two weeks for members of the National Pest Control Association, Inc., New York. Meetings will be held for pest control operators in the eastern, southern and Purdue regions.

The eastern conference will be conducted at the University of Massachusetts, Amherst, on Feb. 2, 3 and 4; the southern meeting will be held at Louisiana State University, Baton Rouge, on Jan. 30, 31 and Feb. 1; and the Purdue group will gather at Purdue University, Lafayette, Ind., on Jan. 30, 31 and Feb. 1, 2 and 3.

A highlight of the eastern conference will be separate discussions on "Sanitation" and "Pest Problems in New Buildings." The southern meeting will feature a discussion on "Biology of Household Pests." Leading topic at the Purdue conference is slated to be: "Insecticidal Dusts and Baits." All three regional meetings will feature discussions on "Insecticide Resistance."

R & H Cuts Amine Prices

Reductions in the prices of tertiary-butylamine and "Primene 81-R" were announced last month by Rohm & Haas Co., Philadelphia. Cuts amount to nearly 20 cents per pound and to 71/2 cents per pound, respectively. The new per pound price schedule, f. o. b. Houston, runs as follows: tertiary butylamine, tankcars and tanktrucks, 45 cents; carloads and truckloads in drums, 47 cents; less than truckload in drums, 471/2 cents. Corresponding prices for "Primene-81-R" are 35 cents, 37 cents, and 371/2 cents, respectively.

Applications s u g g e s t e d for these amines include among others surface-active agents, corrosion inhibitors and dyestuffs.





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with TRITON CF-10

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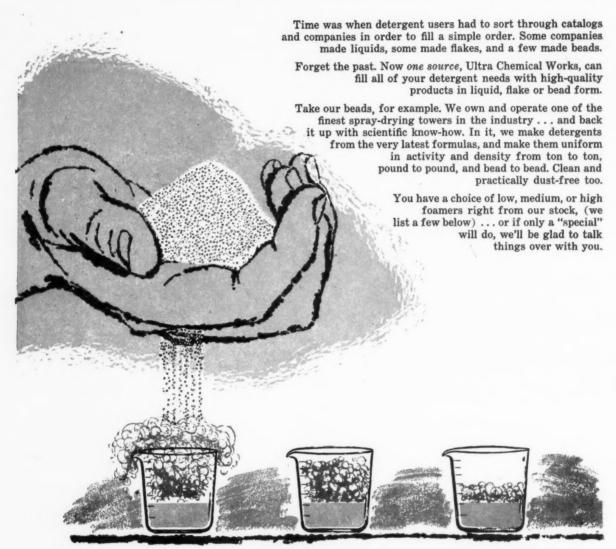
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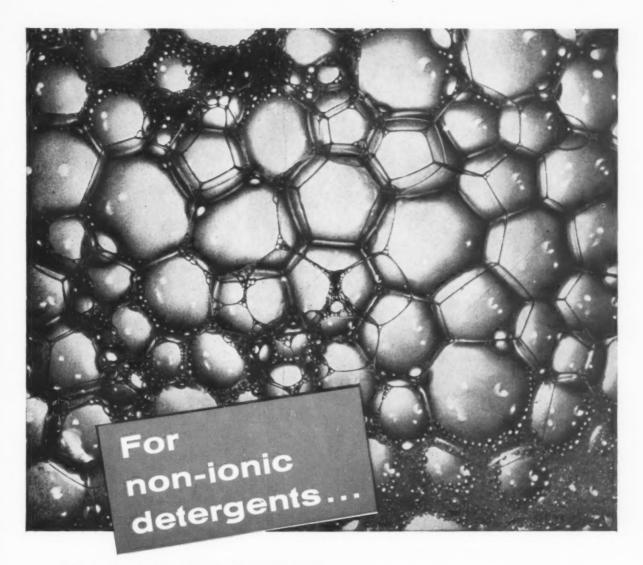
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- Carton flaps are tucked, loaded carton turned upright and discharged for case packing.

Cartons ranging from 1" 11/2" x 313/16" to 21/2" x 4" x 8" are accommodated on this machine by simple adjustments. Toni now has the assurance that future changes in cartoning requirements are merely routine matters.

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... in brief

OUTLOOK... Everybody is predicting great things for business in 1956, so we might as well chip in with our two cents worth. If general payrolls keep at high levels through 1956, and we can see no reason why not, then people will have money to spend. And if the public has money to spend, the demand for household chemical specialties, detergents and soaps will be good. If factories keep busy, the demand for these same products for industrial use will also be good. So, all told, it looks like 1956 should be a good year.

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eles attle There are one or two points, however, which might well be borne in mind. We feel that higher costs for raw materials as well as labor are inevitable, and that the rise in these might be greater than price advances in finished products. Just a hunch, but it could spell out smaller profits for the year ahead.

Another point is the matter of credit. Some smaller manufacturers are pretty well extended in their credit set up. As long as business booms along, all is well. But a few of them might come a cropper. And we feel that it's something to watch a lot more closely than it has been watched apparently in 1955.

COCKTAILS... With keen and unusual interest, we note that Jose Maza of Chile, President of the United Nations General Assembly, complained that he and other delegates to the U. N. have to attend too many cocktail parties. Between the scotch and martinis and eating shrimp speared on a toothpick, he admitted that he was about ready to throw in the sponge. All the U. N. wrangling, he can take in stride, but those cocktail parties have got Senor Maza down, away down.

All of which reminds us that we too have just come through what we consider the most intensive of all cocktail binges. We thank heaven that the holiday season is over with all its guzzling and we can now do a little work. If Senor Maza thinks that he had it tough at the U. N., he should attend some of these trade cocktail parties. Rugged is no word for it. Frankly, we're thinking of starting up an anticocktail party society or something.

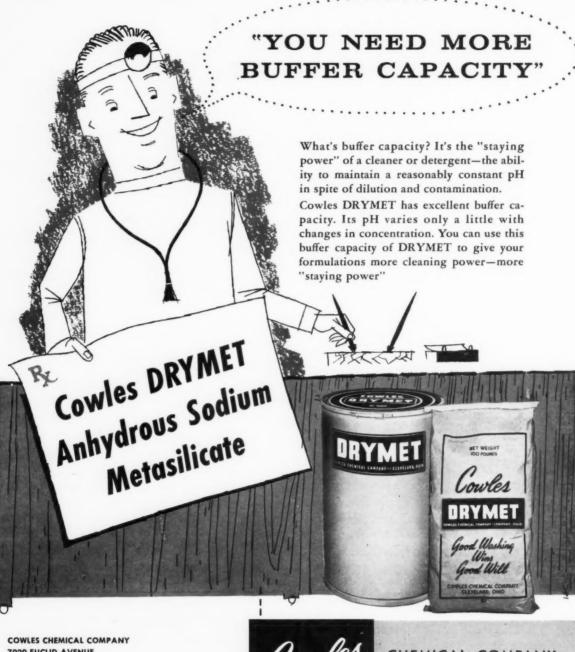
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selling and salesmanship give us a real pain in the neck. We just finished reading one and all you would think necessary in any business are good salesmen. Just a staff of red-hot sales spell binders and success is assured. We beg to differ to a degree. All things being equal, a fine sales staff could be the answer to a manufacturer's dreams. But how often are things equal? In many basic chemicals—yes. In most finished chemical products for household or industry—no.

On numerous occasions we have watched top salesmen beat their brains out trying to sell something which did not meet competitive quality or something which the public neither wanted nor needed. And on other occasions, we have seen people beat a path to the door of the bloke with a better mousetrap—and no salesmen worthy of the name. But so many of these sales courses and books on selling place all their emphasis on the sales approach, salesmen's appearance, sales retreat and the sales spiel. We never heard one of them yet say that quality merchandise is easier to sell than junk.

One of the best salesmen we know is an untidy slob. But the amount and continuity of his sales

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DRYMET File Folder for Technical Data

to top buyers apparently make his firm overlook his appearance. Whether he would sell more dolled up in a Madison Avenue charcoal grey suit and pink shirt remains, in our mind, to be seen.

RESEARCH... "The chemical industry far exceeds all others in the magnitude of its basic research program." This is what the National Science Foundation said recently—and thereby hangs a long tale. Obviously, research for the chemical industry has paid off as the fabulous growth of the industry over the past decade will attest. And it has paid off in hard cash in such magnitude that it could be misleading to the average small outfit which wants to set up a research program, so-called, and emulate the example of his bigger brothers.

Behind every research success which has brought cash to company coffers, there lie ten failures, or rather research projects which ended up with a negative answer. Those are the ones we don't hear much about, but they happen nevertheless. Research is not just a funnel where you put a little money in one end and a lot comes out the other. It's a gamble just like drilling for oil. But withal a worthwhile and vital gamble. All of which is something to remember when launching a new project especially by nontechnical hard heads who hold company purse strings.

PYRETHRUM... Particularly over the past year, a resurgence in the use of pyrethrum based household and industrial insecticides has been noted. Pushed more or less into the background by synthetic insecticide materials in recent years, pyrethrum today is staging something of a spectacular comeback. At the same time, fears for adequate supplies have been expressed by some manufacturers.

Accordingly, a summary of the pyrethrum

market outlook made recently by a well-known world authority should do much to set these fears at rest. He told us that available supplies are sufficient to support a substantial increase in demand without danger of shortages. Even if demand should skyrocket beyond predictable estimates, the situation still will not be critical. As for price, there is no danger of a major advance and no possibility of an appreciable decline. And with this assurance right out of the horse's mouth, insecticide manufacturers may feel better about their 1956 plans which involve pyrethrum.

AEROSOL SURVEY . . . Results of the Du Pont aerosol consumer survey show a continuation in the expansion of the aerosol market. The rate of growth, however, indicates a tendency to slow down as might be expected the nearer market saturation is approached. For example, of all families checked in 1951, some 57 per cent purchased an aerosol product of one sort or another. In 1953, 87 per cent bought one or more aerosol products. In 1955, 91 per cent of families bought some aerosol item. There was surprisingly little difference in the number of families of low and higher income who purchased aerosols.

In some categories, the progress of aerosols according to consumer use continues relatively slow, but in others they have made further strides forward, notably in insecticides, hair lacquers, shave lather, and room deodorants. As for consumer satisfaction with aerosol products, these four groups also lead the field with expressed dissatisfaction figures negligible. Only in the case of personal deodorants and hair shampoos were the latter figures notable, 17 and 13 per cent respectively among those families checked.

From the aerosol survey, the manufacturer of finished products learns much. Irrespective of individual sales, the survey highlights trends which are an important guide to future markets.

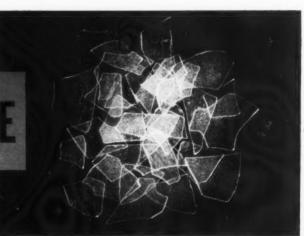
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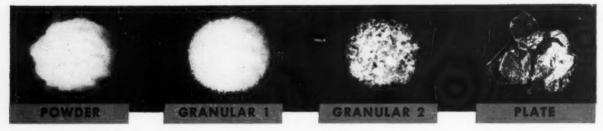
the <u>only producer</u> of this <u>rapidly soluble</u> form of Sodium Hexametaphosphate

HEXAPHOS FLAKE

Pictured at right is an actual size photo showing the crystal clarity and uniformity of Hexaphos Flake.



as well as



Westvaco HEXAPHOS, available in five physical forms, is a true glassy phosphate with superior sequestering and water-softening properties. It has an optimum P₂O₅ content and a pH of 6.7-7.2.

Since Westvaco HEXAPHOS was introduced little more than a year ago, it has been so well

received that we have doubled the output of HEXAPHOS by building a plant at Newark, California to be sure of rendering exceptional service along the West coast. So wherever you are, whatever your needs for HEXAPHOS or for any of the phosphates listed below, you can minimize inventory and be sure of uniform quality by ordering from Westvaco.

Other WESTVACO Phosphates:

Dipotassium Phosphate Disodium Phosphate Monopotassium Phosphate

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Westvaco Mineral Products Division

General Offices • 161 East 42nd Street, New York 17
CHICAGO, ILLINOIS • CINCINNATI, OHIO • HOUSTON, TEXAS • NEWARK, CALIFORNIA

as the reader sees it ...

SAACI Proceedings

Editor:

I have just read the article, "'Soap on Way Out' SAACI Clinic Told" on page 109 of the November issue of SOAP. This article made me extremely envious that I was unable to attend the clinic, but I will feel compensated if it is possible to secure reprints of the various discussions mentioned in the article. Please let me know if reprints are available.

Thank you for any inconvenience this request may cause you, and rest assured that I, like countless other readers, continue to enjoy your magazine each month.

ROBERT C. SCHUETZ, Calgon, Inc. Pittsburgh, Pa.

A proceedings of the annual sales clinic sponsored by the Salesmen's Association of the American Chemical Industry will be available shortly. We will see that Mr. Schuetz receives a copy. Ed.

Pro Propellent

Editor:

Because the term is used so widely in publications today to describe the pressure producing agent in aerosol products, we were especially interested in the editorial viewpoint you presented in the November issue of *Soap & Chemical Specialties* regarding the spelling of "propellent."

Although authoritative dictionaries accept either an "a" or an "e" as correct in the last syllable of the word, we think there is a strong case for using the "ent" ending when referring to the pressuring agent in aerosol products. The majority of the industry, I believe, has been using or swinging over to the "ent" for the last five or six years. We, ourselves, have been using the "ent" ever since we began marketing and advertising the "Freon" compounds for use in aerosols in the late '40s, in order

to distinguish it from "propellant" which was and is being used by explosives manufacturers, particularly in connection with rockets or air missiles.

One of the big factors in our choice of spelling in those early days was the industry's great concern over public opinion regarding safety of aerosols. It was thought desirable to select a term which would forestall any association of aerosol propellents with explosives.

Along the same line it is interesting to note that in those early days the Chemical Specialties Manufacturers Association's predecessor, National Association of Insecticide and Disinfectant Manufacturers, passed a formal motion banning the use of the word "bomb" in connection with aerosols. Their thoughts also were tied in directly with the question of public opinion regarding safety of aerosols.

FRANK R. ZUMBRO, Kinetic Chemicals Division, E. I. du Pont de Nemours & Co., Wilmington, Del.

In an effort to throw some additional light on this knotty problem we've rechecked with the second edition of Webster's New International Dictionary (unabridged). Here's what it says regarding "propellent" and "propellent": "Propellent, n. Something that propels or is capable of propelling; figuratively, a driving motive." "Propellant" as a noun is defined as "a propelling agent; specifically, an explosive for propelling projectiles." We still lean toward the "ant" ending, since we feel that an aerosol propellant is a propelling agent, more in the sense of an explosive for propelling projectiles, but not exclusively that. The "ent" ending in the sense of a "driving motive" seems to us slightly less accurate.—Ed.

Likes Our Editorials

Editor:

I imagine that not often does a reader subscribe to each and every editorial, even in his favorite trade magazine. I happen to be one of those readers and Soap & Chemical Specialties is the magazine to which I refer.

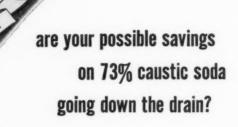
I have often wanted to express my solidarity with your editorials in the past without getting around to it. In the issue of October, 1955, you outdid yourself when you laced into the so-called "Publicity Boys," who are forever trying to chisel free space for silly and inconsequential "Publicity Releases," which should rightfully be published in paid space.

In the December, 1955 issue you did a fine job of debunking the survey racket which is getting on

(Turn to Page 71)

Novel idea of Hewitt Soap Co., Dayton, Ohio, for a private brand soap Christmas promotion is pink soap mouse with gold tail and necklace. Colorful packaging features red top on gold base. Around top of box are words ". . not a creature was stirring." Gold backdrop in box reads: "Season's Greetings from Hewitt."





Increases in freight rates over the past several years make it highly advantageous for you to re-examine the form of caustic you are buying.

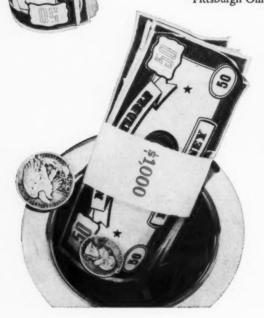
A little figuring right now may save you thousands of dollars next year alone. Some of our customers who have converted from 50% to 73% have realized annual savings ranging from \$2,650 to over \$35,000.

Your location and the volume of caustic soda you use naturally influence the amount of your savings. But small and large users alike can frequently save substantial amounts now going down the drain.

Savings also are often possible with customers who buy solid and flake caustic.

The important thing is to do something about it now. It will cost you nothing to find out. Our Technical Service Department will be glad to assign one of its specialists to discuss your individual case, to make recommendations and to estimate your annual savings.

Write today to our Caustic Soda Department at the Pittsburgh Office.



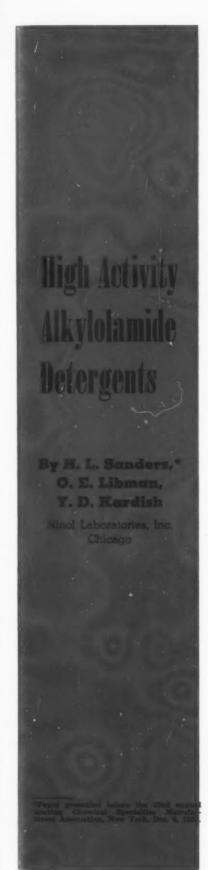
COLUMBIA-SOUTHERN CHEMICAL CORPORATION

SUBSIDIARY OF PITTSBURGH PLATE GLASS COMPANY
ONE GATEWAY CENTER - PITTSBURGH 22 - PENNSYLVANIA



DISTRICT OFFICES: Cincinnati * Charlotte Chicago * Cleveland * Boston * New York St. Louis * Minneapolis * New Orleans Dallas * Houston * Pittsburgh * Philadelphia San Francisco

IN CANADA: Standard Chemical Limited



S. PATENT No. 2,-089,212 issued to Ninol Laboratories in 1937 described for the first time a new class of detergents based on the condensation of fatty acids and amines to give alkylolamides. In particular, the reaction product of lauric of coconut acids and diethanolamine was shown to give water soluble nonionic surfactants possessing excellent detergency and foam, together with unusual thickening action in water.

During the life of this patent, the Ninol-type alkylolamides (or amine condensates) grew to an annual production volume of some ten to fifteen million pounds, with large quantities going into cosmetics, textiles, dishwashing compounds and industrial cleaners.

The chemistry of this process was based on the fact that lauric acid and diethanolamine can react together by condensation to produce an amide as follows:

$$\begin{array}{c} C_2H_4OH \\ \\ C_{12}H_{25}COOH + HN \\ \\ C_2H_4OH \\ \\ Lauric\ acid \end{array}$$
 Diethanolamine

While these amine condensates contained predominantly alkylolamides of this type, it was also recognized that two other reactions could occur, giving ester amines and ester amides as follows:

$$C_{12}H_{25}COO+C_{2}H_{4}$$
 $C_{12}H_{25}COO+C_{2}H_{4}$
 $C_{12}H_{25}COO+C_{2}H_{4}$

Actually, it was found that in a product such as "Ninol AA62" (lauric-diethanolamine condensate) there was present about 70 percent series are not as water soluble as the regular Ninols, due to the absence of the solubilizing by-products. The pure alkylolamide appar-

of lauric diethanolamide, the remainder consisting of small amounts of ester amine and ester amide together with uncondensed diethanolamine and fatty acid which acted as hydrotropic agents imparting greater water solubility to the product.

By a new method of reacting these same components together, it has now been found possible to eliminate most of these secondary products, thereby raising the true amide content above 90 percent in some cases. The amide contents of several condensates of this type are shown in Table 1, where the newer "high activity" condensates (called Ninol "Extras") are compared with the corresponding conventional Ninols.

As can be seen, the amide content has been increased by about one-third in the newer "Extra" series.

These higher activity amine condensates exhibit some features superior to the conventional

$$C_2H_4OH$$

$$= C_{12}H_{25}CON + H_2O$$

$$C_2H_4OH$$
Lauric diethanolamide

Ninols, but are deficient in other respects, so that both types have their place in detergent formulations.

Solubility: As might be expected, the members of the "Extra"

ently has only limited solubility.

In distilled water, for example, none of the three "Extras" is clearly soluble below 10 percent concentration, whereas the regular "Ninols" are clearly soluble at all concentrations.

Above 10 percent, the solubility of the "Extras" increases considerably, due perhaps to the higher amounts of the solubilizing by-products carried in, and clear solutions of all three products can be obtained in the 10-15 percent range. The solutions of "Ninol AA62 Extra" gel rapidly, however, and on standing, crystals of the lauric diethanolamide separate out.

This limited solubility of the "Extras" makes it difficult to formulate liquid detergents in which the amine condensate is the major component, particularly if there are alkalies also present, since these have a marked salting out effect. For example, floor cleaning detergents consisting mainly of "Ninol" and phosphates are very difficult to clarify when the "Extras" are used, although no difficulty is encountered with the usual "Ninols."

On the other hand, when alkalies are absent, the "Extras" can often be solubilized by small amounts of various surfactants; for example, the amounts of surfactant (active) required to clarify five percent solutions of "Ninol 128 Extra" or "Ninol AA62 Extra" are given in Table 2. Obviously, it is more difficult to clarify cloudy solutions of the lauric diethanolamide ("Ninol AA62 Extra") than the coconut diethanolamide.

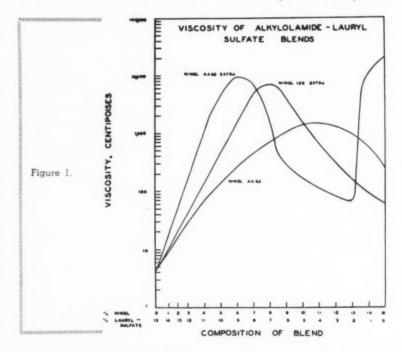
In practice, however, formulations of liquid dishwashing detergents or shampoos usually contain a large excess of anionic detergent and the alkyolamides are all readily soluble under these conditions, so that many cosmetic and household liquids can readily be formulated with the "Extras."

Corrosion: One of the unique features of the amine condensate detergents is their rust inhibiting power in aqueous solutions. As little as 0.5 percent of a "Ninol" in

Table 1. Amide Content of Amine Condensates

| Product | Fatty Acid Base | Amide Content (%) |
|--------------------------------|-----------------|-------------------|
| Ninol AA62 Extra Ninol AA62 | Lauric Acid | 92 67 |
| Ninol 2012 Extra Ninol 2012 | Coconut Acid | 90 68 |
| Ninol 128 Extra Ninol 128 | Coconut Oil | 83 65 |

water will give non-rusting solutions, whereas most other surfactants accelerate rusting of steel. The higher activity "Extras" also act as corrosion inhibitors at low concen"Extras" are not quite as effective in suppressing the rusting action of these anionics For example, at a ratio of three parts amine condensate to one part of alkylaryl sulfon-



trations in water, even though they do not appear to be completely in solution.

However, when sulfonated detergents are also present, the

ate, the regular "Ninols" prevent rusting, whereas the "Extras" do not do so completely.

Cleaning compounds that could be packaged in unlined steel

Table 2. Clarification of 5% Ninol "Extra" Solutions

| | | Percent I | Required to Clarify |
|-------------|--------------------------------|-------------|---------------------|
| Sur | factant Added | Ninol 128 E | xtra Ninol AA62 Ext |
| Ultrawet DS | * Sod. alkyl aryl sulfonate | 0.3 | 10.0 |
| Duponol WA | Sod. lauryl sulfate | 0.5 | 5.1 |
| Ninol 1001 | Capric Diethanolami | de 0.8 | 3.4 |
| Ninox BJO | Nonyl phenol (10 Mo | 1.6 | 6.7 |

Table 3. Detergency Boosting Effect of Alkylolamides

| Com | position (%) | | |
|---------------------|-------------------------|-----------------------|----------------|
| Amine Condensate | Alkyl aryl Sulfonate | Phosphate and Sulfate | Detergency (%) |
| 0 | 25 | 75 | 32.9 |
| 5% Ninol AA62 | 20 | 75 | 42.2 |
| 5% Ninol AA62 Extra | 20 | 75 | 40.4 |
| 5% Ninol 128 | 20 | 75 | 40.0 |
| 5% Ninol 128 Extra | 20 | 75 | 43.0 |
| Hot W | Vater Alone | | 17.9 |
| | | | |

drums when the regular "Ninols" are used might, therefore, require reformulation if the "Extras" are substituted.

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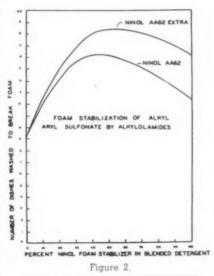
S

TIES

Viscosity: One of the major uses of the amine condensates is in thickening liquid detergents of various types. Apparently the ability to form viscous solutions in water is a function of the amount of amide present, hence the "Extras" appear to be more efficient thickeners than the regular "Ninols" in many cases.

For example, many shampoos contain lauryl sulfates together with an amine condensate as a thickening and conditioning agent. Figure 1 shows the change in viscosity of a 15 percent active solution of this type as the ratio of "Ninol" to sodium lauryl sulfate ("Duponol WA") is progressively altered. As can be seen, the "Ninol AA62 Extra" is a much more effective thickening agent than the regular "Ninol AA62", reaching a peak of 10,000 cp whereas the "Ninol AA62" does not exceed 1,500 cp. This makes it possible to formulate very thick shampoos with the "Extra" type.

Similar results are obtained with blends of amine lauryl sulfates ("Duponol EP") and "Ninols",



although these are not quite so readily thickened as the sodium salts.

It is of interest to compare the relative thickening efficiencies of the "Ninols" shown in Fig. 1. Thus, to achieve a viscosity of, say, 200 cp, it is necessary to use the following:

3.0% Ninol AA62 Extra

4.4% Ninol 128 Extra

5.6% Ninol AA62

Here, "Ninol AA62 Extra" is by far the most effective, only about half as much being required as with the regular "Ninol AA62", which could result in considerable savings.

Because of the shape of the curves, however, it is possible for the "Ninol AA62" to show higher viscosity than the "Ninol AA62 Extra" in certain concentration ranges, as, for example, in blends containing 10 percent Ninol and five percent lauryl sulfate, as can be seen from Fig. 1, but in most commercial formulations, the lauryl sulfate predominates, so this situation does not arise in practice.

Very much the same pattern of behavior is found in blends of these Ninols with a sodium alkyl aryl sulfonate ("Ultrawet DS") as shown in Fig. 2. Although the general viscosity levels are not as high as with lauryl sulfates, viscosities of several hundred centipoise can be obtained.

Detergency: Since the amine condensates are used extensively in heavy-duty household laundering detergents where they function as detergency boosters (as well as foam stabilizers), it was decided to compare the detergent power of the "Extra" and regular "Ninols" in formulations of this type, which are mainly blends of alkyl aryl sulfonates, phosphates, and alkylolamides.

Although a wide variety of laboratory detergency tests are in use, one of the commonest measures of detergent power is the ability to wash soiled cotton, since this represents a rather difficult system to cleanse.

Many different types of washing equipment and artificially soiled cloths are employed in carrying out this cotton detergency test, but no standard procedure has yet gained universal acceptance due to the unexpected effect of the slight variations in the type of soil, etc.

In the present study, the detergency of several amine conden-

Table 4. Stabilization of Alkaryl Foams by Several Nonionics

| Stabilizer Used | No. of Dishes Washed to 1 Stabilizer: 2 Alkaryl Sulfonate | Foam End Point with Stabilizer Alone |
|---------------------------|---|---|
| Ninol AA62 Extra | 18 | 16 |
| Ninol 2012 Extra | 16 | |
| Ninol 128 Extra | 15 | 12 |
| Ninol AA62 | 16 | 12 |
| Ninol 2012 | 15 | |
| Ninol 128 | 14 | 11 |
| None (0.05% alkaryl only) | 9 | (9) |

sates were compared by washing swatches of a commercial soiled cotton cloth (American Conditioning House No. 114 Cloth) in a small "apartment" type Naxon washing machine. The tests were carried out by pinning eight swatches (two inches square) to each of four hand towels, making a total of 32 swatches per run. Nine liters of tap water (125 ppm) were added at 150°F and the washer run for 10 minutes.

Reflectance measurements were made with a Photovelt Reflectometer on the 32 swatches before and after washing, and the average percent brightening or detergency calculated. The standard deviation of the values obtained was found to be about 3.2 units.

Since most laundering and hard surface cleaners contain alkyl aryl sulfonates and phosphates, all the tests were carried out with a built composition of the following type:

Table 5. Foam Stabilization in Hard Water

| Stabilizer Used | No. of dishes to Foam End Point (1 Stabilizer : 2 alkaryl sulfonate) |
|---------------------------|---|
| Ninol AA62 Extra | 17 |
| Ninol 2012 Extra | 15 |
| Ninol 128 Extra | 16 |
| Ninol AA62 | 17 |
| Ninol 2012 | 14 |
| Ninol 128 | 13 |
| None (0.05% alkaryl only) | 12 |
| | |

| Sodium | alkyl aryl sulfonate | 20% |
|--------|----------------------|-----|
| Ninol | | 5 |
| Sodium | tripolyphosphate | 50 |
| Sodium | sulfate | 25 |

In all cases 0.2 percent of this composition was added to the wash water, giving 0.05 percent active detergent. Controls were run with a composition containing 25 percent active alkyl aryl sulfonate and no "Ninol." The results are given in Table 3.

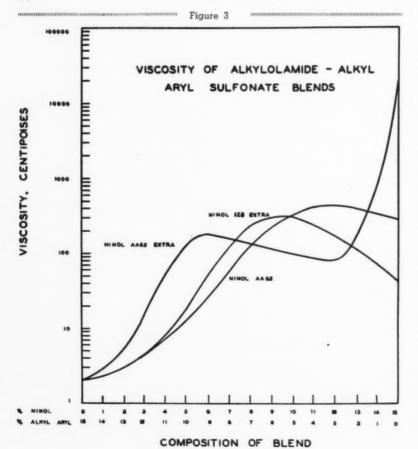
It is obvious that all four of the "Ninols" increase the detergency of the alkyl aryl sulfonate considerably. Since the standard deviation is 3.2, however, it is difficult to distinguish between them, and all four must be considered about equal in detergency.

Foam Stabilization: With the rapid increase in popularity of liquid dishwashing detergents, the foam stabilizing action of the alkylolamides has become of great commercial importance. Practically every liquid household detergent on the market today contains an alkylolamide foam booster as an essential ingredient.

Therefore, it becomes a matter of particular interest to compare the stabilizing action of a regular lauric - diethanolamine condensate like "Ninol AA62" (the type most widely used in liquid detergents) with the newer "Extra" series.

It has by now become standard practice to use an actual dishwashing test for measurements of this type, rather than somewhat unrealistic methods based on shaking or stirring. In the present investigation, dishwashing tests were run as follows:

The detergent under test was dissolved in one liter of water at 45°C in a two gallon enamel dishpan, then three liters of water at 45°C was poured in from a height of 30 inches through a funnel to produce the initial foam. This produced a dishwashing solution with a concentration of 0.05 percent active detergent. China dinner plates were then soiled with six grams each of a mixture containing 50 percent "Crisco" (hydrogenated vegetable oil) and 50 per-





Eric Johnston: "Who's Sabotaging our



Edmund F. Mansure: "Doing Business with Your Government."



Richard B. Mortimer: "Why Renderers Are Sponsoring Research."

Soap Industry Meeting January 25-27

NHE Association of American Soap and Glycerine Producers, Inc., will hold its 30th anniversary meeting Jan. 25-27 at the Waldorf-Astoria Hotel, New York. A paper on "Fatty Acid Soaps in the Manufacture of Synthetic Rubber" by Donald Druesedow of B. F. Goodrich Chemical Co., Akron, will be one of the highlights of the fourpaper program scheduled by the fatty acid division for the afternoon of the 25th. Group meetings of the industrial division will be held concurrently, and will include among other speakers: E. Randa, Armour & Co., Chicago, on "Skin Cleaning"; W. A. McConlogue of

Colgate-Palmolive Co., Jersey City, N.J., on "Fabric Cleaning"; Frank J. Pollnow, Jr., Vestal Chemical Co., St. Louis, on "Building and Equipment Maintenance," and F. T. Lanners, Economics Laboratories, Inc., Minneapolis, on "Dishwashing."

Association president E. W. Wilson, Armour & Co., will give his presidential address and review of the year before the general session in the morning of Jan. 26, which will also hear S. G. Barton, Market Research Corp. of America, on "Soap Industry Marketing Trends." At luncheon, Howard C. Black, Swift & Co., Chicago, will present the glycerine awards and

Eric Johnston, Motion Picture Association of America, Inc., will give a talk on "Who's Sabotaging Our Economy." The industrial and glycerine division will have concurrent meetings in the afternoon. The glycerine program will include a presentation of "Føreign Trade & Trends in Glycerine" by Leo Pasternak, L. Pasternak & Co., New York.

The general session in the morning of the 27th will hear two papers on automation and Frank Coughlin of Procter & Gamble Co., Cincinnati, on "Detergent Research Relating to Water and Sewage Treatment." Luncheon speaker is Lauchlin M. Currie,

Erwin H. Schell: "Automation as Applied to Plant Operations."



JANUARY, 1956

Frank Coughlin: "Detergent Research Relating to Water, Sewage Treatment."



Max Wolf: "New Developments in Acetylated Glycerides."



Program for the 29th Annual Meeting Assn. of American Soap & Glycerine Producers, Waldorf - Astoria Hotel, New York, January 25, 26 and 27th

Wednesday Morning, Jan. 25

- 10:15 A. M.—Fatty Acid Division business meeting, committee
- reports and election of officers. Opening remarks by F. C. Haas, division chairman.

 12:30 P. M.—Joint Luncheon of Fatty Acid and Industrial Divisions. Felix Lacey, presiding. Introduction of Charles. Guests. "World Trends in Fats and Oils, 1956," by E. L. Burtis, Chief, Fats and Oils Section, Food and Agricultural Organization of the
- United Nations 2:15 P. M .- Fatty Acid Division, F. C. Haas, chairman, pre
 - siding.
 "Why Renderers Are Sponsoring Research," by

 - "Why Renderers Are Sponsoring Research," by Richard B. Mortimer, Peterson Mig. Co., president, National Renderers Association.
 "Trends in Textile Assistants Influencing Fatty Acids," by Emery I. Valko, Onyx Oil & Chemical Co., Jersey City, N. J.
 "Fatty Acid Soaps in the Manufacture of Synthetic Rubber," by Donald Druesedow, B. F. Goodrich Co., Arkon, Ohio.
 "Waste Water Problems and Solutions for Fatty Acid Production," by Ralph I. Berman, Bulkley, Dunton Processes, Inc., New York. Industrial Division Group Meetings.
 "Skin Cleaning," E. Randa, Armour and Co., Chicago.
- 2:15 P. M.-
- 2:15 P. M.—"Skin Cleaning, E. nanda, Allifold and Chicago.

 "Fabric Cleaning," W. A. McConlogue, Colgate-Palmolive Co., Jersey City, N. J.

 3:00 P. M.—"Building and Equipment Maintenance," Frank J. Pollnow, Jr., Vestal Chemical Co., St. Louis.

 "Food Processing," Arthur Phillips, Jr., Solvay Process Division, Allied Chemical & Dye Corp., New York

4:00 P. M.—"Dishwashing," F. T. Lanners, Economics Laboratories, Inc., St. Paul.
"Industrial Processing," G. H. Hallenbeck, Swift & Co., Chicago.

Wednesday Evening, Jan. 25

General reception and cocktail party, host: Soap and Chemical Specialties Magazine. 5:00 to 6:30 p. m.

Thursday Morning, Jan. 26

- 9:30 A. M.—Opening Session, W. H. Burkhart, Presiding President's Address and Review of the Year, E. W. Wilson, Armour and Co., Chicago. "What's Ahead for Business in 1956 and Beyond," by Dexter Keezer, McGraw-Hill Publishing Co.,
- New York "Soap Industry Marketing Trends," by S. G. Barton, Market Research Corp. of America.
- 10:30 A. M.—Glycerine Division. Opening remarks by W. H. Cochrane, division chairman. Business Meeting, Committee Reports, Election of Officers

Thursday Afternoon. Jan. 26

- 12:30 P. M.-Luncheon, W. L. Sims, II, presiding.
 - Introduction of guests.

 Presentation of Glycerine Awards, Howard C.
 Black, Swift and Co., Chicago.

 "Who's Sabotaging Our Economy?" by Eric C.
 - Johnston, Motion Picture Association of America. 2:00 P. M.—Industrial Division. General business meeting, Lloyd T. Howells, Presiding.

Dr. C. R. DeCarlo: "Automation as Applied to Office, Marketing Procedures.



Dextor Keezer: "What's Ahead for Business in 1956 and Beyond."



R. I. Berman: "Waste Water Problems, Solutions for Fatty Acid Production.



SOAP and CHEMICAL SPECIALTIES

Reports of group chairmen and election of officers

"Doing Business with Your Government," by Hon. Edmund F. Mansure, General Services Administration, Washington, D. C.

2:00 P. M.—Glycerine Division.
General Meeting, W. H. Cochrane, presiding.
"New Developments in Alkyd Resins," by Oscar
P. Muller, National Lead Co.

"New Developments in Acetylated Glycerides," by Max Wolf, Q. M. Food and Container Institute.

"Foreign Trade and Trends in Glycerine," by Leo Pasternak, L. Pasternak & Co., New York. Division manager's report, E. S. Pattison.

Friday Morning, Jan. 27

Breakfast, host: True Story Magazine—7:30 to 9:00 A. M.
9:30 A. M.—General session, A. K. Forthmann, presiding.
"Automation As Applied to Plant Operations,"
by Prof. Erwin H. Schell, Massachusetts Institute of Technology, Cambridge, Mass.
"Automation as Applied to Office and Marketing
Procedures," by Dr. C. R. DeCarlo, International
Business Machines, New York.
"Detergent Research Relating to Water and
Sewage Treatment," by Frank Coughlin, Procter
& Gamble Co., Cincinnati.

Friday Afternoon. Jan. 27

12:30 P. M.—Luncheon, E. B. Osborn, presiding.
Introduction of guests.
Recognition of Neil H. McElroy for his services
as Chairman of the President's White House
Conference on Education.
"The Impact of Nuclear Energy on Industry,"
by Mr. Lauchlin M. Currie, Union Carbide
Nuclear Co.

2:10 P. M.—Annual business meeting, E. W. Wilson, presiding. Report of manager, Roy W. Peet. Report of treasurer, Nils S. Dahl. Report of nominating committee, C. L. Weirich. Election of 1956 board of directors.

2:30 P. M.—Board of directors meeting, election of association officers for 1956. Technical Advisory Committee meeting, L. H. Flett, chairman.

Friday Evening. Jan. 27

6:30 P. M.—Cocktail reception. Host: Association of American Soap & Glycerine Producers, Inc.
7:30 P. M.—Annual banquet.
Entertainment.

George A. Wrisley Resigns

George A. Wrisley, vicepresident, general manager and a director of Allen B. Wrisley Co., Chicago, recently announced his resignation from that company. At the same time he resigned as a member of the board of directors of the Association of American Soap & Glycerine Producers. He has been a member of the board of directors of the Soap Association for 18 years, and served four terms as president. He was also chairman of several of the committees of the association. A resolution citing Mr. Wrisley for his service to the association was passed by the board of directors and a plaque repro-



George A. Wrisley: Retires from Allen B. Wrisley Co., and as Soap Assn. director.

ducing the resolution has been presented to him.

E. A. Moss of Swift & Co., Chicago, has been named by the association to succeed Mr. Wrisley on the executive committee and A. W. Schubert of Emery Industries has been appointed on the Interim Committee.

French Honor Durrer

E. R. Durrer, president of Givaudan Corp. and its associate companies, Givaudan-Delawanna, Inc., and Sindar Corp., New York, has been elected to the board of the French Chamber of Commerce of the United States, Inc., it was announced recently.

Dr. Louis Schwartz: Reports on book edited by him on industrial dermatoses.



L. H. Flett: chairman of the technical advisory committee meeting.



E. Scott Pattison: Manager of the Fatty Acid and Glycerine Divisions.



JANUARY, 1956

Detergents as Spotting Agents

ARMENTS from "hydrophobic" fibers, such as nylon, "Dacron"† polyester fiber, and "Orlon"† acrylic fiber, have received considerable acceptance on the basis of their ability to be washed and worn again without ironing. This has led in many cases to improper washing and to inadequate soil removal, especially of the types of soil that are generally considered to be "oily" in nature.

In order to see how effective various detergent systems are, a standard soiled fabric was needed. A choice was made of a fabric of "Dacron", and an artificially oily soil developed by R. E. Wagg (1). This soil formula is based on an analysis of laundry liquor extracts and was presumed to represent a "natural" oily soil. It contains a variety of animal, vegetable, and mineral oils and fatty acids, along with graphite ("Oildag") for blackness. In order to have a somewhat darker soil, Wagg's formula was modified slightly by using four times as much "Oildag" as the original recipe, making appropriate allowances for the mineral oil in the added "Oildag". The soil dispersion was padded onto a filament shirting fabric of "Dacron", using several passes to improve evenness of application. The fabric was air dried and baked according to the original Wagg recipe.

Using artificially soiled swatches of "Dacron" prepared in this manner, a number of detergents were evaluated by washing in a "Launder-Ometer" with retail household detergents as well as

some made us from synthetic surfactants plus a builder consisting of metasilicate, tripolyphosphate, and carboxy-methyl cellulose. Reflectance measurements were made on soiled and washed samples using a Photovolt Model 610 reflectance meter with a tristimulus green filter. While several of the retail household detergents were moderately effective, and several of the synthetic surfactants were somewhat better, none of these detergent systems was sufficiently effectiveeither on artificially soiled cloth or naturally soiled garments-to be considered completely satisfactory. This bears out the experience of our wives who constantly complain how difficult it is to get the collars and cuffs of our cotton and synthetic shirts really clean.

New Detergency Technique

IN order to get better removal of oily soil, a new detergency technique was developed. Since some hydrophobic fibers are highly wettable by oils and less wettable by detergent solutions (2), it was felt that using water in the detergency process would probably result in reduced effectiveness: in the presence of water it would be expected that the surfactants would form micelles, the surface of which would be composed of polar ends of molecules, and such micelles would be

By Harry E. Stanley*

Textile Fibers Department
E. I. du Pont de Nemours & Co.

and

Martin E. Davis

Chemicals Division Atlas Powder Co. least likely to wet either the oily soil or the hydrophobic fiber substrate.

For this reason surfactants were applied in essentially pure form directly to the soiled, dry fabric. After thoroughly working in, water was finally added, and the combined surfactant and oily soil was flushed away.

This new process resulted in detergency (as measured by percent increase in reflectance) two to four times that obtained with a standard retail detergent used in the normal manner.

It was recognized early that this technique was closely akin to that used by housewives for many years when they rub severely soiled spots on a wet bar of laundry soap and work the resultant paste into the soiled area. In fact, the results from such use of a wet bar of yellow naphtha laundry soap were taken as a reference standard with which surfactants—used by the pure liquid process—could be compared.

A number of surfactants have been evaluated by this technique, including both nonionic materials (which are usually pure liquids) and anionic materials, most of which were used as concentrated pastes. The effectiveness of several representative types are listed in Figure 1. For comparison, the results of this technique using two bar soaps and those obtained with regular washing are listed at the bottom of the table.

It is apparent from these results that this spotting technique is quite effective in removing oily soil. It is especially effective when using certain selected surfactants such as "Renex"†† 20. Results

^{††}Trade mark of Atlas Powder Co.

^{*}Paper presented at the 42nd annual meeting Chemical Specialties Manufacturers Assn., New York, Dec. 6, 1955.

[†]Trademark of E. I. du Pont de Nemours and Company.

vary from an 85 percent increase using normal washing methods to a 330 percent increase when employing the surfactant and the new technique.

In the interests of determining the versatility and scope of this new technique with the surfactant, its application to fabrics of other fibers was investigated. The source of oily soil was extended to include machine shop grease and black mimeograph ink, both of which are "oily" and "greasy" in nature and difficult to remove.

Figure 2 shows fabrics of "Dacron", nylon, "Orlon", and cotton impregnated with shop grease, and washed in a Terg-O-Tometer for 10 minutes, using 0.25 percent retail household detergent. This simulates the normal washing method and was used as a reference point for evaluating the new materials and techniques. Obviously the results could stand some improvement.

Figure 3 shows the results of one of the first tests with the new method on fabrics of cotton (80 x 80) print cloth soiled with black duplicating ink, Swatch 212

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Fig. 1. To effect better soil removal, a number of surfactants were applied to the solled areas directly on the dry fabric. After being worked in thoroughly, water was added and the surfactant and oily soil flushed away. The chart below shows percent increase in reflectance using five different types of surfactants, a yellow bar soap and a toilet soap. The final listing on the chart shows an 85 percent increase in reflectance when washed in the normal manner in a standard laundry machine.

W INCREASE IN

| SURFACIANT | REFLECTANCE |
|--|------------------------|
| "Renex 20" | 330 |
| Alkyl thiopolyethylene o | jlycol260 |
| Alkyl phenoxypolyethyle | ne glycol250 |
| Sulfated mahogany oil dry cleaning detergent | |
| Alkylaryl sulfonate (pa | aste)160 |
| Yellow naphtha laundry b | or <i>(paste)</i> _195 |
| "Pure" toilet bar (paste |)160 |
| (A regular washing with | |

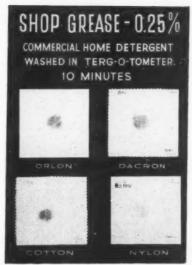


Fig. 2. To get a photographic record of the effectiveness of normal washing methods, four samples stained with shop grease were washed with a commercial home detergent for 10 minutes. It is obvious that conventional laundry methods do not remove concentrated soil satisfactorily.

was treated with cold tap water, 211 with a yellow bar soap and 210 with the surfactant. The rubbing time was 200 seconds for each swatch. Results with the surfactant shown by Swatch 210 were very satisfactory.

Figure 4 shows fabrics of "Dacron" filament yarn soiled with shop grease. Swatch 171 was brushed with a white bar soap, 172 with a cold tap water, and 169 with the surfactant. These swatches were brushed 40 seconds. Again soil removal with the surfactant was excellent.

Figure 5 portrays a fabric of "Orlon" filament yarn impregnated with black mimeograph ink. Swatch 196 was treated with cold tap water, 195 with a yellow bar soap, and 194 with the surfactant. Brushing time was 100 seconds.

Figure 6 represents a fabric of nylon filament yarn soiled with shop grease. Swatch 178 was treated with cold tap water, 177 with yellow bar soap, and 176 with the surfactant. The brushing time was 40 seconds. As shown, the spotting agent completely removes the soil. From these and similar experiments we concluded that this technique using the surfactant is

equally useful for removing oily soil spots from all washable fabrics, including those of cotton and rayon as well as the hydrophobic fibers.

The method of application is important in obtaining the best results with such spotting or pretreating agents. It seems necessary to apply mechanical action directly to the soil in the presence of such agents. When the soil is on the surface of the fabric, the mechanical action can be provided by the finger tips or with a sponge or brush.

With embedded soil, we have been most successful with a technique somewhat different from the ordinary rubbing or brushing: making the fabric flex sharply, so that all yarns are bent around rather sharp radii. This bending of yarns results in the individual fibers slipping against one another and thereby accomplishing the desired rubbing action within the yarn. This action is illustrated in Fig. 7, which shows that slippage occurs between fibers when a yarn bundle is bent.

Several practical methods are available for flexing the fabric in the desired fashion. The simplest is to crumple or wad the fabric repeatedly in the palm of the hand in the presence of the surfactant.

Another technique commonly employed is to rub the fabric against itself in such a way that

Figure 3



CHIDEACTANIT

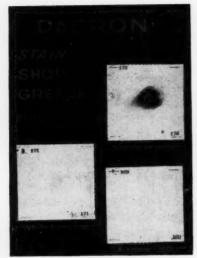


Figure 4



Figure 5



Figure 6

it repeatedly bends around a sharp radius; it is the *flexing*, not the *rubbing*, which is effective.

A third technique is to place the fabric on a soft backing, such as a towel or rubber mat, and rub it gently with the round edge of spoon handle. A suitable tool could be readily combined with the cap of a consumer package.

In order to make "Renex" 20 available in suitable form to those interested in distributing the product to the retail market, a study was made of compositions and methods of packaging.

It was desired to develop compositions which would readily lend themselves to convenient packaging, maintain effective stability

Fig. 7. Flexing of the fibers either by bending around a sharp radii or by rubbing on a soft surface with a sharp edge actually causes the individual fibers to slip against one another. This slipping action is very important in achieving complete cleansing of deeply imbedded soils.



and form retention over a wide variance of temperature, and yet display no adverse effect on the containers. Finally, the formulas must demonstrate the same standards of soil removal as previously described.

The first success was a "gel" suitable for dispensing from a collapsible metal tube (Figure 8) and has the following composition:

90% "Renex" 20

2% Tallow Soap

8% Water

This "gel" is readily prepared by first premixing the soap and water at 90-95°C, to form a homogeneous paste which is then added to the surfactant at 90-95°C, in a Hobart mixer and stirred for

Figure 8



Most effective cleansing was achieved by placing the dry soiled fabric on a soft cloth or backing and rubbing with a round edge similar to the teaspoon handle shown here. This method is equally effective with either the aerosol, paste or squeeze bottle



SOAP and CHEMICAL SPECIALTIES



Fig. 9. Dispensing cleaner from aerosol container.

five minutes. Stirring time is kept to a minimum to avoid occlusion of air in the composition. The hot liquid is then poured into selected containers, such as tubes or jars.

A second formula was developed which is suitable for dispersing from aerosol containers (Figure 9). The composition is as follows:

Lastly, we found "Renex" 20 completely adaptable for packaging in polyethylene containers (Figure 10) in its pure and natural state, without additional formulation, and ready made for purchasing and resale.

It is worth mentioning that an excellent composition from the standpoint of soil removal was a paste consisting of the surfactant admixed with sodium hexametaphosphate. However, due to the poor stability of the resultant mixture, the formula was discarded.

There are numerous other formulation possibilities as yet unexplored. For example, a combina-

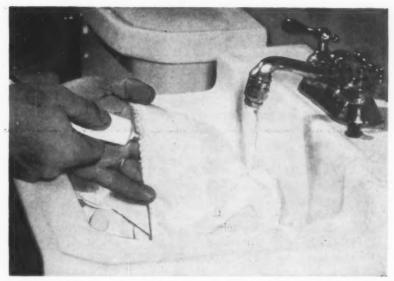


Fig. 10. A formula is suggested for cleaner to be applied from a polyethylene container.

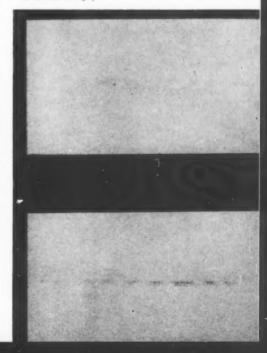
tion of a tall oil ester with a suitable solvent might well enhance its versatility and action. A more extensive survey of builders should be made to insure that the optimum in synergistic effect has been reached.

One practical use to which this spot removal technique has been put has been in removing the soil line from collars and cuffs of shirts. As noted earlier, when such garments have been given inadequate washing—such as repeated casual handwashing in a lavatory—a soil line will frequently form at collars and cuffs. Even when machine washing has been used, such a soil line will form in some cases. At earlier stages of wearing such soil is on the surface of fibers, but it adheres tightly.

It has been shown with a number of shirts of "Dacron" polyester fiber that application of this spot removal procedure, using "Renex" 20, will remove such soil lines even after thirty wearings with poor washing. A sample cuff before and after application of this process is shown in Figure 11. Also, it has been shown that application of this technique before each washing—or even once in every four or five washings—will prevent the build-up of surface oily soil at these sensitive spots.

In the interests of furthering our knowledge of consumer acceptance, we made a limited field study by enlisting the cooperation of the families of Atlas company personnel. The three types of containers were supplied to each of 12 households in an effort to determine possible preference. For the purposes of this test we confined (Turn to Page 163)

Fig. 11. Lower photo shows the usual shirt cuff after wearing. Repeated washings by normal methods often fail to remove such soil. The upper section of the photo shows the same piece of fabric after being treated with the surfactant and rubbed in the hand in such a manner as to cause the fibers to bend sharply.



No "Ideal" Waterless Cleaner

U. S. Public Health Service looks for "ideal" waterless hand cleaner; can't find single one

THE U.S. Public Health Service has been searching for the "ideal" waterless hand cleaner and can't find one. Addressing the American Academy of Dematology and Syphilology at its 14th annual meeting in Chicago, Dec. 3-8, Dr. Donald J. Birmingham of the USPHS reported that in tests conducted under his direction, "no one waterless hand cleaner was found ideal."

Of the 15 products figuring in his study, he said, 11 were rated "satisfactory in performance," this ranging from "moderately good" to "high grade." The other four, however, were found "definitely inferior." He showed a slide listing the 15 brands examined in his study but did not further mention brand names.

Waterless hand cleaners, Dr. Birmingham said, do have practical application for selective usage. They do remove; tar, paint, dyes, grease, grime and other difficult soils and can be used effectively by machinists, mechanics, road construction gangs and some others where they do satisfy certain needs better than conventional cleaners.

"But not if they contain alkalies or solvents," he added.

The USPHS study was made at the request of the Army Air Force, Dr. Birmingham said. One conclusion reached was that waterless hand cleaners have practical application on aircraft, submarines, surface ships, in the arctic or tropical regions, and on deserts, where water is not readily available. Because of their instability under wide temperature variations, it is not advisable to stock them in large quantities, he cautioned.

Although it is generally

thought that waterless hand cleaners are a recent development, he recalled that they have been used by painters and mechanics for 25 years. Many of the older products contained kerosene, alkaline salts, and ammonia and were known to produce dermatoses, he said. He mentioned one instance involving 55 cases, which were cleared up 25 days after the workers quit using the offending cleaner.

Today there are some 30 waterless hand cleaners on the market, he said, each with a "catchy" name and bright colored labels and containers to impart selling appeal. Industry, he said, has been reluctant to accept them but some recent changes have been made to include wetting agents and improved solvents. Some of these improved products are good, he declared; some are not. No large soap manufacturer makes them but many manufacturers of industrial cleaners have started production.

The armed forces, Dr. Birmingham continued, have recognized that waterless hand cleaners do have some advantages and, at the request of the Aero Medical Laboratory at Dayton, O., the Public Health Service undertook an evaluation of these products. The object was to determine their feasibility for use and how to control any cutaneous irritation that might result from such use.

This investigation was conducted from the Occupational Health field headquarters of the USPHS in Cincinnati, O., where Dr. Birmingham is medical director and chief dermatologist.

It was found, he said, that manufacturers frequently changed their formulas and that one in use today might be completely different six months from now. This made it difficult to classify ingredients used, but on this some manufacturers cooperated by telling the USPHS what they used.

In general, he said, the products can be classified into three types; those using light petroleum oils or light technical oils; those using ammonia, alkalies and amines; and those using wetting agents or surfactants.

In the tests to determine stability of the 15 brands selected at random from the field. Dr. Birmingham related, nine of the 15 products remained stable up to 105°F., but only two of the 15 were found stable at all temperatures. Those in which the ingredients became separated created more irritation than in their normal state. They acquired a strong odor and an uninviting appearance which did not appeal to users. He cautioned against purchase of such unstable products in large quantities for storage over any long period. This, he said, "would be a waste of money."

In tests for alkalinity and acidity one of the 15 products was found to contain free alkali in excess of the allowable amount, he said. Free fatty acid content ranged from 0.35 to 16.5 percent.

In tests for efficiency, the majority was found capable of removing soils, such as paint, ink, tar and others of a tenacious nature, with greater rapidity than conventional cleaners used in comparison tests.

Manufacturers, Dr. Birmingham said, did not always furnish information regarding the solvent content of their products. Components similar to kerosene were found in them while the presence of aromatics and other elements was detected in them. Ten of the 15 products contained solvents up to 35.78 percent per 100 grams.

The Air Force, he said, was particularly interested in the possibility that residual matter left on mechanics' hands might cause corrosion of the critical metals used

(Turn to Page 173)

Salt solids removal from a

Glycerine Recovery System

By H. M. Muir

North Hollywood, Calif.

HE discussion of the unit process described in the following report deals strictly with the removal of sodium chloride crystals from a glycerine recovery system used in the soap making industry. The basic concepts of the unit process can readily be applied to any process where a continuous washed solids recovery system from an evaporator is paramount in the unit operation.

In the soap industry, where the full-boiled process is in operation, one phase of the production process is the recovery of the crude glycerine from the wash pickles, which are accumulated from the boiling procedure as a co-product along with the produced soap. Present in these pickles, along with the glycerine, is sodium chloride which is another ingredient used in the boiling process. Sodium chloride carried by the pickles is in approximately a 12 percent concentration. It is the efficient removal of this salt from the concentrated glycerine being produced that becomes a major factor in determining the overall efficiency of the glycerine recovery system.

"Salt Extractor" Recovery

CALT recovery may be handled in several ways. One of the older methods still in common use is the connecting of a pair of "salt boxes" or "extractors" directly off the bottom of the evaporator. These "salt boxes" are cylindrical drums that are fitted with a perforated plate, covered with a fine mesh stainless screen, to hold back the precipitated salt crystals and form a salt bed. The two boxes are used alternately. The salt crystals settle out into the boxes during the evap-

oration process and when a box is full of salt, it is sealed off from the concentrated liquor in the evaporator and made ready for the actual salt removal. The heavy glycerine liquor remaining in the "salt box" is drawn off with vacuum back into the evaporator for recovery. The remaining salt bed left in the box is then steamed for a sufficient time to remove a large part of the residual glycerine from the salt. This dilute liquor is also returned to the evaporator. After sufficient steaming time, water is run into the box with steam to dissolve the salt bed and make up the brine solution. The brine solution is pumped to storage for subsequent use in the soap making process.

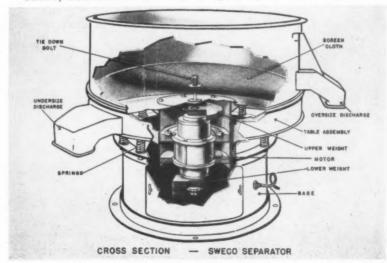
"Extractor" System

THE "extractor" system has four disadvantages. First: this system requires a considerable amount of labor and attention time. Second: the handling required by the salt box gives wide temperature va-

cuum, and liquid level variations to the evaporation procedure making control of the operation very difficult. Third: the glycerine removal from the salt bed is inefficient. Although all of this glycerine is not a direct loss due to the reuse of the brine in further processing work, it has been estimated that as much as 25 percent of this available glycerine is lost in the process. The fourth and last disadvantage, perhaps the foremost reason for discontinuing the use of this type of salt removal, is the inability of setting up an efficient continuous evaporation process that is being looked for wherever

The procedure that seems to be coming into general acceptance recently is the use of a centrifuge to give an efficient salt and glycerine recovery along with the continuous evaporation process. Its use brings about the elimination of all the aforementioned disadvantages that

Cutaway cross section of Southwestern Engineering Co. "Sweco" separator.



are involved in the use of "salt boxes." It would appear that this system is the ideal approach to the solids removal problem, but it has several characteristics that might make the smaller industries shy away. The initial cost of this equipment is considerable. Without sufficient volume being handled, this cost may not be easily justified by these firms. The secondary cost of maintenance is considerable due to the highly machined nature of the equipment. With these objections in mind an investigation was started to see if a relatively simple and inexpensive procedure might be developed to overcome the objections of the smaller industries and at the same time give a process paralleling the centrifugal salt removal methods.

New Unit Process Development

THE evaporator being used in all of this process development work is a single effect type, having a capacity of 4000-5000 pounds of water evaporated per hour. The first approach to the continuous salt removal problem was the construction

of a six inch diameter 14 foot long salt settling and washing leg directly off the cone of the evaporator in which a countercurrent evaporator feeding system was employed.

It was theorized that with the use of a countercurrent feed in a suitably designed leg, with the wash pickle containing only about eight percent glycerine, a crystal washing and classification effect would be possible and give the preliminary glycerine removal from the settling salt. After experimenting with several different leg designs and various flow rate adjustments, it was found that the required results could be accomplished very nicely with properly balanced operational conditions. It was determined that approximately a 40 percent solids slurry could effectively be discharged from this system. A 50 to 70 percent lower glycerine concentration could be maintained simultaneously in the slurry than was actually being concentrated in the evaporator. The next phase of the problem was the handling of this salt slurry and efficiently removing the last possible amount of residual glycerine left on crystals.

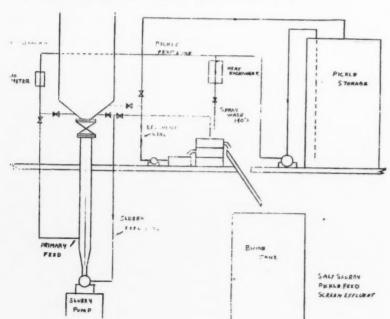
It was known that the physical structure of the sodium chloride crystal would lend itself very effectively to a vibrating screen unit; namely, a dewatering type. With the primary glycerine removal already carried out in the countercurrent wash leg, it was felt that the glycerine content would be low enough to allow the vibrating screen, fitted with an effective spray wash, effectively to remove the residual glycerine still adhering to the salt crystals.

The type of screen chosen to handle the solids was the South-Engineering Company "Sweco" Separator Model H-1D. This unit is a new entry into the vibrating screen field and it is unique for its circular vibratory action in three planes rather than the two planes common to other comparative units. The "Sweco" Separator has distinct action in the horizontal, radial and tangential planes which allows a very efficient spray wash system to function upon the salt solids. The screen allows a wide range of operating limits and continues to function very effectively. The analysis of the salt removed from the unit (using a 120 mesh screen cloth) over a complete evaporation cycle, which is the concentration of the weak wash pickle (eight percent glycerine) to a crude (80 percent glycerine) showed the unit to be approximately 98.5 percent effective. This compares to the 99-99.5 percent effectiveness of the centrifuge and the 96-97 percent glycerine recovery usually found possible with the "salt boxes."

Advantages of New Unit Process

THIS new unit process development, which is the combination of the primary washing and classification in the countercurrent settling leg, with the "Sweco" H-1D Vibrating Screen Separator, gives a salt solids removal very closely paralleling the methods now in use with the centrifuge. It also gives several advantages to the process not available with the centrifuge.

Flow sheet showing actual plant installation of the "Sweco" separator for removing salt solids from the glycerine recovery system.



(Turn to Page 59)

TGA Scientific Section Meets

Papers on shampoos, germicides in soaps, aerosol spray evaluation highlight meeting

SHAMPOOS, germicides in soaps, aerosol spray evaluation and container development were among subjects of outstanding interest studied at the mid-year meeting of the scientific section of the Toilet Goods Association, held Dec. 14, at the Waldorf-Astoria Hotel, New York. The all-day meeting opened with a paper on "Aerosol Spray Patterns" by Morris J. Root, technical director of G. Barr & Co., Chicago. The spray can be characterized by droplet size, distribution area of coverage, temperature, wetness and liquid volume. Droplet size distribution is determined by the characteristics of the valve and button, the amount, the type of propellant, the temperature and the viscosity and surface tension of the formulation. A high pressure propellant usually produces a finer spray, but air pressure in the container makes the spray coarser, Mr. Root said. A mixture of high and low pressure propellants makes for a coarser spray than the use of an intermediate propellant. By increasing viscosity of the product the particle size increases, and may change the spray into a stream. Surface tension does not have very great influence. Area of coverage is defined by the angle projected by

the spray and depends on the design of the button. Spray temperature is determined by the amount and type of propellant used and the liquid volume delivered per unit time is a function of the valve inner orifice.

Various methods for measuring spray characteristics were reviewed by Mr. Root. A new dye technique for the measurement of droplet size distribution as well as area coverage was described in detail and illustrated with slides. Oil soluble and water soluble dyes are used, depending on the solubility characteristics of the product. Patterns obtained by this technique indicate particle size, distribution, wetness, etc.

Strobe light photographs are another source of information on spray characteristics, such as angle and area of coverage. Mr. Root showed examples of this method also.

Cream Shampoos Paper

R. L. PATTERSON of Procter & Gamble Co., Cincinnati, reviewed factors affecting the consistency of paste cream shampoos. Consistency variations during nor-

Photo taken during luncheon at the midyear meeting of TGA Scientific Section.

mal shelf life in shampoos of the sodium alkyl sulfate sodium stearate system can be attributed to size. shape and mode of aggregation of crystals. Cooling time, end or packaging temperature, and tempering or early storage temperature have pronounced effects on crystal growth and final stability characteristics of the shampoo. Mr. Patterson stressed the advantages of fast cooling and cold packing of shampoos which have been finished at 85°C. This may require special equipment, such as continuous freezing apparatus. Cold packaging should be followed by a tempering period of one day during which crystal growth takes place. Optimum tempering temperature is 80°. Effects on consistency exerted by some of the constituents of the shampoo formulation were also studied. Sodium stearate has a firming effect; free fatty acid (stearic) acts as a softening agent; electrolytes have a firming influence up to three percent; up to two percent lanolin makes the shampoo smooth, a higher percentage will make it too soft: perfumes are softening agents and should be selected early so that their effect can be correctly balanced; other additives, Mr. Patterson said, are too insignificant for investigation.

"Factors Contributing to the Performance of Shampoos and to Consumer Acceptance" was the title of a paper by Gabriel Barnett and Donald H. Powers, Warner-Lambert Pharmaceutical Co., New

(Turn to Page 55)



West End...new producer of anhydrous sodium sulfate from natural source

The excellent acceptance by industry of this white, free-flowing material, guaranteed 99.5% Na₂SO₄, suggests your consideration of West End as a new source of supply. We will be pleased to submit samples, prices and freight schedules on request. Please include specifications.



End Chemical Company SODA ASH . BORAX . SODIUM SULFATE . SALT CAKE . HYDRATED LIME

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Introducing



FITS all standard 3/4" drum openings.

ATTRACTIVE bronze color

IMPROVES prestige of your product.

To end all faucet troubles!

NO LEAKAGE

—easy operation, not affected by temperature.

ENDS CHEMICAL REACTION

—with strong acids, alkalies, oils, etc.

LIGHTER WEIGHT

—longer lasting and more durable than metal.

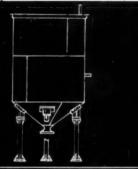
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ANTORNE

MULTI-METER CORPORATION

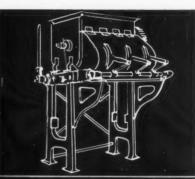
BOX 154, W. TOLEDO STATION . TOLEDO 12, OHIO



KETTLES



CRUTCHERS



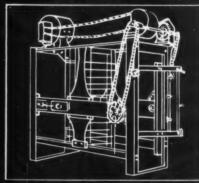
AMALGAMATORS

Making Good Soap BETTER, for 114 Years

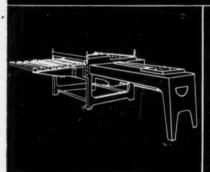
114 years ago Houchin started producing soap making machines.

Practically all basic soap making machinery today is derived from original Houchin inventions.

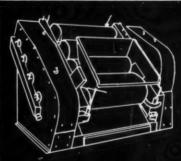
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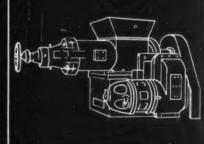
SLABBERS



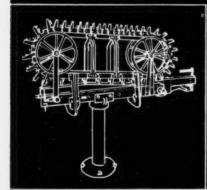
LAUNDRY SOAP CUTTERS



MILLS WITH GRANITE OR CHILLED



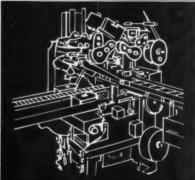
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CONTINUOUS SCRAPLESS
ADJUSTABLE TOILET SOAP CUTTERS



PRESSES-FOOT OR AIR OPERATED



WRAPPERS FOR ALL SIZES OF SOAP

HOUCHIN MACHINERY CO., INC. HAWTHORNE, NEW JERSEY, U.S.A.

Production SECTION

Ion Exchange for

Purifying Crude Glycerine

RUDE glycerine can be upgraded to C. P. or better at the cost of one cent per pound by the "ion exclusion" method according to a paper presented at the American Oil Chemists' Society's fall meeting in Philadelphia by Glenn E. Prielipp, Dow Chemical Co., Midland, Mich., and Harold W. Keller, Illinois Water Treatment Co., Rockford, Ill.

The ion exclusion process is a unit operation which utilizes ion exchange resins to separate solutes without use of chemical regenerants. Separation is dependent upon the physical and chemical properties of the resin and no net ion exchange takes place. When an aqueous solution of two or more solutes is percolated through an ion exclusion column (which consists of ion exchange resins) a separation of the solutes occurs and they appear in separate fractions in the effluent. This principle was applied to the separation of nonionic glycerol from its ionic impurities, such as sodium chloride, in a pilot plant at Lever Brothers Co., Hammond, Ind., which was operated jointly by Lever, Dow, and Illinois Water Treatment. While ion exclusion is most applicable at higher ionic concentrations, including cases where ion exchange is prohibitive in cost, it is generally not feasible to remove all of the ionic material by this method. Therefore, the product obtained from the ion exclusion plant was finished by ion exchange and evaporation.

The authors showed that pilot plant results agreed with the literature and with laboratory results and that scale-up to full commercial production would present no difficulties. Operating variables investigated included temperature, flow rate, nonionic concentration, ionic concentration and feed volume.

By employing the ion exclusion process it was possible to separate up to 90 percent of the total dissolved ionic salts from soap lye crude glycerine. Glycerine losses amounted to approximately 0.6 percent by weight. The following operating conditions proved most satisfactory: crude feed rate-4.25 pounds (82 percent crude per hour per cubic foot resin); feed concentration, C_f - 30 percent glycerine by weight; feed volume, V_t - 26 percent bulk volume of resin bed, V_T ; flow rate — 0.42 gpm/sq. ft.; and temperature - 180°F.

A cost analysis was included for a glycerine plant processing 1000 pounds of 82 percent crude per hour 250 days per year and using the above operating conditions:

- Items to be considered: a. steam for heating; b. soft water for rinsing; c. cooling between ion exclusion and ion exchange steps; d. power for pumping and electrical control equipment; e. glycerine losses; and f. labor.
- 2. Volume of resin required:
 1000 lbs/hour = 235 cubic feet.

4.25 lbs/hour/cu.ft.

- 3. Operational cost per day:
 - a. Steam at 35 cents/1000
 - b. Soft water at 15 cents/1000
 - gallons 2.65 c. Cooling ahead of ion ex-
 - change at 1/8 cost of heating 0.58
 - d. Power at 2 cents/1000 gallons 0.51
 - e. Glycerine loss of 0.6 percent at 26.5 cents/pound 25.00
 - f. Labor at \$2.40/hour for 24 hours/day 57.60

TOTAL \$91.00

TOTAL \$31.0

\$4.66

- 4. Equipment and resin cost per year:
 - a. Equipment amortization over 10 year period \$6,800.00
 - b. Resin amortization over 3 year period 3,000.00
- 5. Total cost per year:
- a. Operational cost \$91.00 x 250 \$22,750.00

Crude glycerine can be upgraded to C. P. or better at a cost of one cent a pound by employment of the "ion exclusion" unit operation.

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CONSOLIDATED PACKAGING MACHINERY CORP.

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This Model D-6-F Rotary CaPeM increased production to such an extent that Texize Chemicals, Inc., Greenville, S. C. recently ordered a duplicate. This completely automatic line is operated continuously at production rates in excess of 200 bottles per minute.

CaPeM Screw Cappers apply all types of metal and plastic screw caps to jars, bottles, cans and jugs ranging in size from 1 oz. to gallons. Speeds range from 40 to 300 containers per minute. Write for complete information.

b. Equipment amortization 6,850.00 c. Resin amortization 3,000.00

\$32,600.00

6. Yearly output of 95 percent glycerine:

1000 x .82/ .95 x 24 x 250 = 5,190,000 pounds

7. Cost per pound 95 percent glycerine: \$32,600

0.63 cents

5,190,000 pounds

8. Cost per pound for ion exchange (finishing step). Chemicals, resin, and equipment amortization 0.12 cents.

9. Cost per pound for concentration by evaporation 0.25 cents.

 Total cost per pound to produce 95 percent glycerine by ion exclusion, ion exchange, and evaporation processes:

a. For ion exclusion
b. For ion exchange
c. For evaporation
0.63 cents
0.12 cents
0.25 cents

TOTAL 1.0 cents

Labor is placed at \$2.40 per hour for a 24 hour day. This is believed to be a maximum price because the equipment would be automatic freeing the operator for other duties for a majority of the time. However, doubling the labor cost would increase the total cost of producing one pound of CP glycerine by this process by about ½ cent per pound.

Nacconates Data

Six technical bulletins on "Nacconates" (diisocyanates) were published last month by National Aniline Division of Allied Chemical & Dye Corp., New York. Bulletin I-17 gives general information on this class of products, including generic properties, data on 27 reactions common to all diisocyanates, eight pages of suggested uses and 132 literature references. The other five bulletins carry supplementary data on the individual products: "Nacconate" 80, 65, 100, 200, and 300. The complete series of any one of the individual booklets may be had free of charge by writing National Aniline at 40 Rector St., New York 6, on company letterhead.

Cyclohexanol Data Sheet

Cyclohexanol, an intermediate and component of solvent systems for the specialty field, is the subject of a revised technical data sheet published recently by Monsanto Chemical Co., St. Louis, Mo.

Cosmetic Chemists' Meeting Features Paper on Glycerides

STUDY of mono-, di-, and tri-glycerides, their properties and actual and potential applications, was one of the highlights of the tenth anniversary technical meeting of the Society of Cosmetic Chemists held in New York on Dec. 15. V. K. Babayan of E. F. Drew Co., New York, reported results of evaluating the following systems: 1.)20 parts light mineral oil, 80 parts water, five parts monoglyceride; 2.)90 parts light mineral oil, 10 parts monoglyceride; 3.)90 parts RBF cottonseed oil, 10 parts monoglyceride; and 4.)90 parts water of pH 9, 10 parts monoglyceride. In each case the oil phase and the monoglyceride were mixed and heated to 60° C, and allowed to cool to room temperature while the agitation continued.

In system 1, water and oil, the glyceryl mono-palmitate and mono-myristate were superior from the standpoint of emulsion stability, thickening power, opacifying power, texture of emulsion and appearance. Glyceryl mono-oleate showed less binding or thickening characteristics but nevertheless gave thin but stable emulsions. Glyceryl mono-stearate and laurate gave relatively poor systems and the emulsion broke within several hours. In a mono-glyceride of the mixed fatty acids of oleic, palmitic and stearic, the percentage of palmitic appeared to dominate the performance characteristics.

In system 2, oil and monoglyceride, the viscosity was directly in line with the increase in the chain length of the fatty acid used, with glyceryl mono-laurate giving the thinnest gel and glyceryl monostearate giving the thinnest. Glyceryl mono-oleate proved to be completely soluble in the oil giving a clear and homogeneous solution.

In system 3, vegetable oil and monoglyceride, results were fairly consistent with those obtained in system 2, with viscosities and gelling properties of palmitic and myristic somewhat more marked than with mineral oil.

In system 4, where small

Assembled for installation ceremonies are new Society of Cosmetic Chemists officers for 1956. From left to right, Robert A. Kramer, Evans Research and Development Corp., secretary; Gabriel Barnett, Warner-Hudnut Co., director; George G. Kolar, Kolar Laboratories, president; Savery F. Coneybear, Colgate - Palmolive Company, director, and Walter A. Taylor, Cheseborough - Pond's, Incorporated, treasurer. President - elect, Sabbat J. Strianse, Vick Chemical Company, was not present when picture was taken.



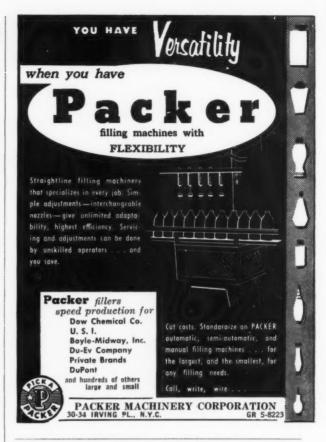
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makes simple work of Filtering, Mixing, Storing



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If this opportunity is of interest to you, kindly furnish a resume of your background and qualifications.

Please — no brokers, no stock promotions, no mergers, no "time payment deals", no curiosity seekers.

BOX 566

% SOAP & CHEMICAL SPECIALTIES

254 W. 31st Street

New York 1, N. Y.

amounts of soap could be formed due to the presence of alkali and fatty acids, unusual thickening and suspending characteristics were noted for the myristic and palmitic mono-glyceride. Combined effects of the monoglyceride and the soaps of these two fatty acids appeared to yield thicker and smoother creams than those of stearic, oleic, and lauric.

Monoglycerides of saturated fatty acids are resistant to changes in odor and color due to oxidation and their preparation is easy and economical. Their use in oil and water and in water systems appears to hold promise. In oil systems where miscibility is desired the monoglyceride of oleic acid can be effectively used. For the thickening, gelling, and opacifying of oil systems the monoglycerides of stearic, palmitic and myristic can be used to good advantage.

Triglycerides were tested for solubility, suspending and gelling characteristics in both mineral and vegetable oils. Tri-olein was found to be completely miscible in mineral oil. Palmitic had greater gelling properties than stearic, which in turn was more effective than the myristic ester. The same degree of gelation was possible in the given system even with lauric ester, but only at greater concentrations of the glyceride. In the vegetable oil system palmitic and myristic esters exhibited better gelling and suspending charactertistics than the stearic, which in turn was better than lauric. Tri-laurin was found to form a crystal pattern which is unsuitable for its field of application.

All tests showed the superiority of palmitic and mysristic acid esters over other fatty acid glycerides as thickening, creaming and opacifying agents in mineral and vegetable oil systems.

A series of high lauric containing triglycerides known as hard butters were then considered by Mr. Babayan. Adjustment of physical and chemical properties to end use is possible by the selection of fatty materials and by modifica-

tion of processing techniques, making such butters more flexible and versatile than the natural prod-(Turn to Page 98)

TGA Section Meets

(From Page 47)

York, read by Dr. Powers. Cleansing and foaming action is needed in a shampoo, but it is more important that the hair be left soft, lustrous and manageable, Dr. Powers said. In studying these five characteristics of a successful shampoo a new Latherometer was developed, capable of simultaneous comparative testing of 12 different products. With this new measuring device the foaming and lathering action of soaps, detergents, and leading shampoos was tested under varied conditions. The variables were water hardness, concentration of the cleansing agent or shampoo, and time of application. The effect of varying quantities of sebum, sweat, soil, and oil on the lathering action was also studied. The testing of shampoos by Latherometer in the laboratory is claimed to correlate satisfactorily with use tests and consumer performance evaluation.

To achieve consumer acceptance, a shampoo must exhibit high-volume and stable foam, Dr. Powers said. Consumer panel tests showed preference for products of high concentration and good hard water foaming characteristics.

Germicidal Soap Tests

A^N "In Vitro Test for Predicting the Effectiveness of Antibacterial Agents in Soap" was described in a paper by C. L. Bechtold, E. A. Lawrence, and E. M. Owen of Colgate-Palmolive Co., Jersey City, N. J., read by Mr. Bechtold. Antibacterial agents under consideration for use in soap are screened by the pallet halo test. This is a modified agar plate technique using pellets of the deodorant soap composition in place of the antibiotic. 18 hours old m. pyogenes aureus is used as the inoculum on seed agar. For the second screening the authors suggest replacement of the Cade handwashing test by the protein adsorption test. This consists of washing ordinary photographic film with an acid fixer to remove the silver nitrate. Discs are cut from the dry film, washed with test soap composition and evaluated for adsorbed and active antibacterial agent by an agar plate test. Screening of germicidal agents for incorporation in soap is thus greatly accelerated.

"A Practical Approach to Container Development for Toiletries" was presented by Albert R. Jasuta of Bristol-Myers Research and Development Laboratories. Choice and evaluation of containers should depend on the following considerations: protection and preservation; compatibility with contents; eye appeal; utility and function; costs; regulations and safety; and operations at the filling plant, Having warned against overpackaging. the speaker went into some of the requirements of a modern container development department. A man specializing in this field should have training in packaging technology, imagination, a good appreciation of the economics involved, and the capacity to get on with people, he said. Some of the testing facilities were then described and illustrated with slides. Mr. Jasuta showed his firms' climate rooms, physical abuse testing machines, vacuum leak testing device, tube crushers, propellant leak tester for aerosols, torque testers for caps and seals, and many other testing devices. In addition to the department's own resources, package development also calls upon pilot plant and plant packaging units. In addition the services of consultants and suppliers are used for specialized tasks.

Other presentations were a paper and film dealing with tissue culture applications in pharmacological evaluations by Ivor Cornman, Hazleton Laboratories, Falls Church, Va. A paper on measurement of perspiration activity by Otto Jacobi and Herbert Heinrich of Kolmar Research Center, Chicago, was also presented.



This fine, faithful, ever-busy machine is sure death to "high production cost." Starts the day on the "double quick" and continues to turn in a record output all day, every day.

Fills liquids from low to high viscosity bottles, jugs, F style cans up to gallon — also handles polyethylenes. Can be used as straight vacuum, a straight pressure, or in combination. Selection made with turn of valve, automatic feed and discharge.

Completely automatic, semi-automatic, hand-fed equipment to clean, fill, close, convey jars, bottles, tins, collapsible tubes, polyethylenes.

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CSMA Committee Specifications

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Laboratory pressure filler for aerosol bottles or cans.

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ACTUALLY PAYS FOR ITSELF
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Replaces Uncertain Hand Capping; Eliminates Fatigue and Worn-Out Fingers.

Any Cap — Any Container — Perfect Sealing! Adjustable Tension Device Controls Cap Tightness. Portable, Flexible, Fast; Easy to Operate.

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Soap & Syndet Tests, Specs.

Seifen und Waschmittel (soaps and detergents) Definitionen. Untersuchungsmethoden und Anforderungen (definitions, test methods, and standards) by the Swiss Society of Analytical and Applied Chemistry, Verlag Hans Huber, Bern and Stuttgart, 1955. cloth 81/4 by six inches, 139 pages, price 12 Swiss francs or DM. This second and enlaged edition of a volume published in 1943 surveys concisely and comprehensively the accepted methods for testing and evaluation of washing agents. An extensive chapter on synthetic detergents is included and the information relating to phosphates has been much enlarged. The chapter dealing with performance tests and the definitions of synthetic detergents have been completely rewritten. A number of useful tables and an excellent index are appended. The physical appearance of this little volume is particularly pleasing.

New Hysan Catalog

A 64-page illustrated catalog was published recently by Hysan Products Co., Chicago, on the hundreds of items in the firm's line of sanitary chemicals, floor maintenance supplies and aerosols. Separate sections illustrate and describe soaps and soap dispensers, detergents, deodorants and cleaning compounds. Several pages are devoted to aerosol packaging. Both catalog and a new price list are available to all jobbers on request to Hysan Products Co., 932 West 38th Place, Chicago 9.

Hooker's First 50 Years

Salt & Water, Power & People, a short history of Hooker Electrochemical Co., by Robert E. Thomas, 1955, cloth, nine and one eighth by six and one eighth of an inch, 109 pages, 107 illustrations. Dedicated to Hooker's employees by R. Lindley Murray, chairman of the board, and Bjarne Klausen, president, the volume was published to celebrate the firm's fiftieth anniversary. The technical history of the firm is outlined from the earliest

experimental Townsend cell which operated at 150 amperes to the Hooker type S cells which operate at up to 28,000 amperes to manufacture chlorine and caustic soda by electrolytic process. Hooker's corporate history is presented starting with Elon Huntington Hooker's Development and Funding Co. and leading up to the recent merger with Durez Plastics & Chemicals Inc. The leaders who guided the firm through its fifty years course are portrayed.

High Activity Detergents

(From Page 36)

cent of a blend of flour, egg, butter, mayonnaise and tomato juice. These dishes were then washed in the dishpan one by one, using a uniform wiping and splashing motion. The number of dishes washed before the first permanent break appeared in the foam layer was taken as the measure of foam stability. Reproducibility of results to within better than one plate could easily be obtained in replicate runs.

Dishwashing test results with several stabilizers are listed in Table 4 where a blend of 33 percent stabilizer and 67 percent sodium alkyl aryl sulfonate was used at 0.05 percent total concentration in tap water (125 ppm hardness). The last column of this table also gives some results using 0.05 percent of stabilizer alone, without any alkyl aryl sulfonate added. The precision of this method is such that a difference of one dish is considered definitely significant.

From Table 4 it is evident that most of the amine condensates exert a pronounced foam stabilizing effect which prolongs the dishwashing foam of the alkyl aryl by 50-100 percent. Furthermore, the higher active "Extras" are in all cases definitely better than the corresponding conventional "Ninols."

It is also interesting to observe from the last column of Table 4 that the foaming power exhibited by these "boosters" when used by themselves (no alkyl aryl sulfonate), is roughly proportional

to their effectiveness in stabilizing the alkyl aryls. In other words, a good foam stabilizer for alkyl aryl sulfonates should exhibit good foaming properties by itself.

To show the effect of varying the proportion of alkylolamide to alkyl aryl sulfonate, a series of dishwashing tests was run in which increasing proportions of amine condensate were added to the sodium alkyl aryl sulfonate, maintaining the total active detergent at 0.05 percent in tap water. One set was run with "Ninol AA62," the other with "Ninol AA62 Extra." As can be seen from Fig. 3, the maximum foam stabilizing effect is obtained at approximately one part stabilizer to two parts alkyl aryl.

From Fig. 3 it is also possible to calculate the relative efficiencies of the two lauric-diethanolamides. For example, 33 percent of "Ninol AA62" is required in the blend to reach a 16 plate end point, whereas only 25 percent "Ninol AA62 Extra" is needed. It can, therefore, be concluded that the "Extra" is 25-30 percent more effective, on a weight basis, making it probably the most effective foam stabilizer available.

Some tests were also made to investigate the effect of hard water on foam stabilization by amine condensates. The same procedure as above was followed, except for the fact that synthetic "Navy" hard water of 350 ppm was used, instead of tap water. Some of the results are given in Table 5. As can be seen, the results are almost the same in hard water as in tap.

Conclusions: The new series of high activity amine condensates described here exhibits outstanding thickening and foam stabilizing power, and these products are highly effective in formulations such as liquid dishwashing detergents and shampoos. In formulations containing a preponderance of amine condensate (such as floor cleaners) the lower water solubility of the newer products limits their use, and the regular "Ninols" are preferable in such systems.

The World-Famed Lilacs Bloom Again

Heiko Perfume and Cosmetic Compounds are once more available to fine perfumers.

Heine and Company has again begun to produce the quality specialties so highly prized and widely known for their unsurpassed excellence the world over.

Heine and Company is resuming full production. Mr. Frederick C. Keidel, long distinguished in the field, will be Chief Perfumer, assisted by a staff of competent perfumers and chemists. Mr. Chester Tompkins will be in charge of sales.

Now you may order superb:

Heiko-Lilac "A"

Oil of Lilac known around the world as an indispensable base for modern perfumes with the natural odor of fresh flowers.

Heiko-Jasminette White

Most widely used in cosmetic compositions.

Heiko-Pink

Respected for its retentive power, and highly recommended for all carnation compositions.

Your welcome inquiries for samples of all inimitable Heiko flower products, aromatic chemicals, and essential oils will receive our interested, prompt attention. Please let us help you meet your finest quality requirements in every detail.







Folder on CSMA

An eight-page folder describing the history, purpose, activities and organization of the Chemical Specialties Manufacturers Association is now available from CSMA at 50 E. 41st St., New York 17, N.Y. Details on qualifications for membership, cost, committees and work of the association in the legislative reporting, survey, standards and testing fields are listed in the folder.

Offers Methyl Bromide

Kolker Chemical Corp., Newark, N. J., has started full scale production of methyl bromide it was announced last month. The fumigant comes packed in regular one pound cans with two percent chloropicrin as warning agent, and in 125, 150, and 450 pound cylinders of 100 percent methyl bromide.

Salt Solids Removal

(From Page 46)

Unlike the centrifuge which needs a uniform solids slurry feed, the "Sweco" Separator has a much broader limitation range with which to work and still operate efficiently. This fact allows a much more flexible control system to be utilized.

Another advantage is the fact that this unit can operate straight through to a crude glycerine product (80 percent glycerine) whereas the centrifuge methods now in use stop at approximately 60 percent glycerine. This method requires that all the accumulated salt from the 60-80 percent glycerine evaporation must be rehandled by the evaporator in the next evaporation cycle.

The upkeep of this new process will be much below that of the centrifuge due to the overall simplicity of the system. The screen life of the separator should be high. due to the crystal structure of the salt which has a low abrasion factor. The initial cost of the equipment is approximately one tenth

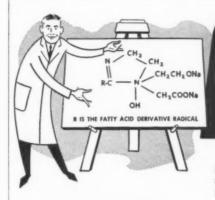
that of a comparative centrifuge and would make this system practical in even the smaller volume industries.

Summary

A brief description of the two most common types of salt removal systems now in operation is presented here along with a newly developed unit process that allows an operation quite similar to the continuous centrifugal process, at a considerable reduction to the initial

operating and maintenance costs.

The first stage of the unit process in point makes use of a countercurrent evaporator feed entering into a specially designed salt settling leg where the primary washing and classifying effects take place. The second stage of the process makes use of an efficient vibratory separating screen fitted with the secondary washing effect to wash and dewater the solids satisfactorily before final discharge.



MIRANOL HM CONC.

Lauric Derivative

General purpose detergent and wetting agent. Upgrading of detergent and soap formulations.

MIRANOL CM CONC.

Coconut Derivative

Clear product for dishwash, floor cleaners, wax removers, industrial cleaners, steam jenny cleaners and bubble bath.

MIRANOL SM CONC.

Capric Derivative

Clear product, low wetting qualities for shampoos, medicated shampoos, rug and fabric shampoos.

MIRANOL MM CONC.

Myristic Derivative

High temperature detergent, good foamer, shampoo lubricant, lubricant for metal drawing, cutting oils.

MIRANOL DM

Stearic Derivative

Low priced snow white paste. Hair rinse. Textile softener, can be used as an anionic or cationic product. Will not yellow with heat application.

MIRANOL "M" SERIES" OF AMPHOTERIC SURFACTANTS

FOR EVERY PURPOSE

This is a series of revolutionary surface active agents of a basically new and different structure with amazing properties and versatility.

NOTE THESE ADVANTAGES:

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*U.S. Patent No. 2,528,378

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NEW Patents

The data listed below is only a brief review of recent patents pertinent to the readers and subscribers of this publication. Complete copies may be obtained by writing to the publisher of this magazine, Mac Nair-Dorland Co., 254 W. 31st Street, New York 1, N. Y., and remitting 50c for each copy desired. For orders received from outside of the United States the cost will be \$1.00 per copy.

No. 2,721,124 through No. 2,721,133. Herbicidal Compositions, patented by John C. R. Warren, Elmira, Ontario, Canada, assignor to United States Rubber Company, New York, N. Y. Low-freezing concentrated herbicidal compositions of matter are described. In patent No. 2,721,124 the active herbicidal ingredient comprises a mixture of the isopropyl and sechutyl esters of 2,4-dichlorophenoxyacetic acid in proportions of from 30 to 60 per cent of said isopropyl ester and correspondingly from 70 to 40 per cent of said sec-butyl ester, said percentages being by weight based on the sum of said esters.

In patent No. 2,721,125 the active herbicidal ingredient comprises a mixture of the ethyl and isopropyl esters of 2,4-dichlorophenoxyacetic acid in proportions of from 20 to 55% of said isopropyl ester and correspondingly from 80 to 45% of said ethyl ester, said percentages being by weight based on the sum of said esters.

In patent No. 2,721,126 the active ingredient comprises a mixture of the n-butyl and isobutyl esters of 2,4-dichlorophenoxyacetic acid in proportions of from 35 to 70 percent of said n-butyl ester and correspondingly from 65 to 30 percent of said isobutyl ester, said percentages being by weight based on the sum of said esters.

In patent No. 2,721,127 the active herbicidal ingredient comprises a mixture of the n-butyl and isopropyl esters of 2,4,5-trichlorophenoxyacetic acid in proportions of from 50 to 85% of said n-butyl ester and correspondingly from 50 to 15% of said isopropyl esters, said percentages being by weight based on the sum of said esters.

In patent No. 2,721,128 the active herbicidal ingredient comprises a mixture of the isopropyl and secbutyl esters of 2,4,5-trichlorophenoxyacetic acid in proportions of from 5 to 55% of said isopropyl ester and correspondingly from 95 to 45% of said sec-butyl ester, said percentages

being by weight based on the sum of said esters.

In patent No. 2,721,129 the active herbicidal ingredient comprises a mixture of the ethyl and isopropyl esters of 2,4,5-trichlorophenoxyacetic acid in proportions of from 20 to 60% of said ethyl ester and correspondingly from 80 to 40% of said isopropyl ester, said percentages being by weight based on the sum of said esters.

In patent No. 2,721,130 the active herbicidal ingredient comprises a mixture of the isobutyl and secbutyl esters of 2,4,5-trichlorophenoxyacetic acid in proportions of from 40 to 75% of said isobutyl ester and correspondingly from 60 to 25% of said sec-butyl ester, said percentages being by weight based on the sum of said esters.

In patent No. 2,721,131 the active herbicidal ingredient comprises a mixture of the isopropyl and isobutyl esters of 2,4,5-trichlorophenoxyacetic acid in proportions of from 20 to 50% of said isopropyl ester and correspondingly from 80 to 50% of said isobutyl ester, said percentages being by weight based on the sum of said esters.

In patent No. 2,721,132 the active herbicidal ingredient comprises a mixture of the isobutyl ester and secbutyl esters of 2,4-dichlorophenoxyacetic acid in proportions of from 35 to 65% of said isobutyl ester and correspondingly from 65 to 35% of said sec-butyl ester, said percentages being by weight based on the sum of said esters.

In patent No. 2,721,133 the active herbicidal ingredient comprises a mixture of the isopropyl ester and isobutyl esters of 2,4-dichlorophenoxyacetic acid in proportions of from 10 to 40% of said ester and correspondingly from 90 to 60% of said isobutyl ester, said percentages being by weight based on the sum of said esters.

No. 2,723,242. Method of and Apparatus for Milling Soap and Similiar Plasticizable Material, patented by Donald E. Marshall, Edina, Minn., assignor to Micro Processing Equipment, Inc., Des Plaines, Ill. This patent teaches a method of milling soap and other plasticizable material, which comprises: feeding the material to be milled at high pressure into an elongated feeding zone; by said pressure forcing the material from the feeding zone along the entire length thereof and simultaneously in opposing directions into an elongated milling zone communicated with the feeding zone along the entire length thereof so that the material enters the milling zone from opposite directions; effecting a substantial drop in the internal pressure of the material as it passes from the feeding zone

and enters the milling zone; subjecting the material in the milling zone to a high speed shearing and compacting action; and discharging the milled material from the elongated milling zone.

Also covered is an apparatus for milling soap and other plasticizable material, comprising: cooperating stationary and movable milling elements having milling surfaces; means mounting said milling surfaces; means mounting said milling elements and constraining them to relative movement with their milling surfaces opposing one another in closely spaced relation to define a milling zone; wall means fixed with respect to the stationary milling member and defining a large capacity passage having an inlet for the material to be milled, said wall means being shaped to provide constricted communication between said passage and the milling zone at opposite sides of said zone so that material may flow from said passage into the milling zone simultaneously from opposite sides thereof whereby a balanced material feed into the milling zone may be had; and means for feeding the material to be milled under high pressure into said large capacity passage to thereby cause the material to move into the milling zone simultaneously from opposite sides thereof and by its passage through the constricted communication between the passage and the milling zone have its pressure greatly reduced before it comes into contact with the moving milling element.

No. 2,723,990. Process for Sulfonating Detergent Alkylates, patented by Everett E. Gilbert, Flushing, and William J. Moran, Rockville Centre, N. Y., and John K. Petry, Demarest, N. J., assignors to Allied Chemical & Dye Corporation, New York, N. Y. The patent discloses a process for the sulfonation of detergent alkylates, comprising the following steps: mixing a liquid detergent alkylate consisting of alkyl substituted mononuclear aromatic compounds having alkyl side chains containing predominantly from 8 to 20 carbon atoms inclusive, with a quantity of concentrated sulfuric acid equal to at least about 5% by weight of the detergent alkylate, therafter introducing into and uniformly distributing throughout the liquid mixture a gaseous mixture containing at least about 5% and not more than about 80% by volume of sulfur trioxide, the remainder being an inert gas, the quantity of said gaseous mixture introduced being an amount sufficient to effect substantially complete monosulfonation of the nuclear radical of the alkylate, while maintaining the temperature of the mixture at not more than about 50° C. during the introduction of the gaseous mixture, and digesting the mixture until monosulfonation is substantially complete.

No. 2,722,479. Triisooctyl Phosphite and Herbicides Containing Same, patented by Jesse Roger Mangham, Richmond, Va., assignor to Virginia-Carolina Chemical Corporation, Richmond, Va. The patent discloses a new composition of matter, triisooctyl phosphite.

She wants a fine clear-liquid shampoo

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UNIFORM RESULTS for every batch of clear-liquid shampoo formulated with Du Pont DUPONOL EP. It's laboratory-tested to make sure you get a consistently superior shampoo every time.

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DETERGENT

DU PONT TRADE-MARK FOR SURFACE-ACTIVE AGENTS



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PRODUCTION

By E. G. Thomssen, Ph.D.

ITH growing life expectancy the problem of retirement and those related to it gain in importance every year. Approximately 14 million Americans are over 65, the usual retiren nt age. Nearly one half million is being added to this figure every year. Owing to the physical demands of their occupations production workers usually retire earlier than office employees. Retirement policies of industrial concerns, their effect on the nation's economy, and on the lives of the retiring individuals are to be considered here.

Many firms enforce retirement at a certain age, usually between 65 and 70 years of age, while others allow voluntary retirement or make exceptions in special cases. Each method has its pros and cons. Aging workers usually lose in operating efficiency. To separate the competent operative from the less competent, may be very difficult. In plants where no age limit is specified unjust discrimination and erroneous judgement may aggravate the problem. Companies which adhere to a compulsory retirement age through all echelons of personnel claim that their policy improves morale, permits promotions, increases production, and induces elderly employees to prepare adequately for old age.

Opponents of compulsory retirement argue that not the years but the working capacity of the individual should be the yardstick to measure his working life span. Older workers often prove more steady, less apt to loaf, less accident prone. Know-how acquired through experience may bring dividends in short cuts and economy in time and

Age, it may be contended, cannot be calculated as a mathematical equation; it must be judged individually. Some men perform their

best work at 70. Given suitable working conditions and incentives. certain tasks are carried out more efficiently by elderly persons than by young workers. Shifting of aging workers to lighter work has been proved to be profitable. Men past 65 make better elevator operators, time keepers, store room clerks, inspectors, etc., than do younger men who become restless in such jobs. Some firms have shortened the work week for valuable older emplovees and have divided one job into two and have found such policies profitable.

The attitude of labor unions also enters into this picture. Generally they do not oppose compulsory retirement, provided that the retired individual has a means of support such as a pension or social security. Unions generally favor an arrangement which gives younger men a chance to move into jobs. An older person clinging to a post when he should step down, thus blocking the advancement of a younger, more capable man, creates resentment within an organization and may be a serious burden to a company. This situation is more liable to occur in a small firm than in a big concern.

Age barriers in hiring and compulsory retirement are considered by some people a threat to our

Dr. E. G. Thomssen



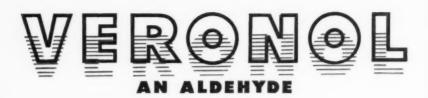
national economy. They look upon such restrictions as discriminatory practices and consider them comparable to employment policies which led to adoption of fair employment practices acts in several states.

The aging and the very young contribute least to the country's productivity. Life expectancy is constantly moving up and the 65 plus group is growing at an accelerated pace. If retired it will constitute an ever-increasing drain on public finances. In addition this group will represent a more and more important proportion of the consuming public. Volume of consumption will depend on their incomes. However, 58 percent of this age group have annual incomes below \$1500. The involuntarily retired face a grave financial problem. Surveys indicate that many of them would prefer full time work to life on partial pay or on a pension. A workable answer to this problem is hard to find. It frequently involves men who are still in their fifties. Once out of work for some reason they find it impossible to obtain a new position. They are not entitled to social security payments until they reach the age of 65. Companies hesitate to employ a man of this age, because he will prove a costly proposition in any pension plan and because other employees may resent his being hired. It has been suggested that an emplovee leaving one company for another be permitted to transfer his pension equity. A tax concession to companies employing elderly people is another suggestion. Raising of retirement age; adjustment of pay to lower productivity and periodic adjustment of pensions to rising prices are other potential remedies.

(To be continued)

Hand Pump Catalog

VIKING PUMP CO., Cedar Falls, Va., issued recently a 28page general purpose pump catalog. It is a handy piece of literature and may be had upon request. The catalog gives complete data on 306 of Viking's models in capacities of



| | ~ . ~ . |
|---------|-----------------|
| Typical | Specifications: |

| PHYSICAL APPEARANCE: | Light yellow liquid. |
|------------------------------------|--|
| ODOR TYPE: | Aldehydic; suggestive of a mixture of higher aliphatic aldehydes. |
| SOLUBILITY: | 10 parts soluble in 100 parts 80% Ethyl Alcohol. |
| STABILITY: | Stable in soaps, cosmetics and perfumes. |
| REFRACTIVE INDEX n 20 : | 1.4525 |
| SPECIFIC GRAVITY $\frac{20}{20}$: | 0.8500 |
| SUGGESTED USES: | As an ALDEHYDE TOP NOTE 1/10 to 1/2%. Extremely powerful, it is an interesting addition to existing fragrances to add life and improve character of bouquet. |
| QUALITY: | Highly purified for use in fine perfumes. Held to rigorous specifications by our control laboratory. |
| | |

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CYCLAMAL • FLOWER OIL WHITE LILAC

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from 1/2 to 1050 g.p.m. It also describes 450 other pumps as well as many other special types to fit any pump requirements.

Automatic Fire Detection

WALTER KIDDE & CO.. Belleville, N. J., feature their ATMO for automatic fire protection. This fire detector works on the principle that over-heated air expands rapidly. The device quickly detects a blaze and triggers the fire extinguishing systems. In cases where smoke indicates fire, a smoke detector is employed. By the use of an analyzing unit, air is constantly sniffed and when smoke is present an alarm is sounded. More information is available upon request.

Push - Pull Controls

ONSIDERABLE savings in time, labor and material result from the use of their "True Lay Flexible Push-Pulls" according to American Chain and Cable Co., Detroit 2, Mich.

A data file compiled to answer questions gives full information on its uses. Among the items remotely controlled are valves, clutches, spray nozzles, fans, pumps and many others. This device is both flexible and solidly built for long wear.

New Brochures

S. Sanitary Products Co.. · Chicago, recently issued a series of colored brochures illustrating methods of manufacture and uses of its line of sanitary chemicals. The legends are concise and clear. Among subjects discussed are wash room sanitation, antiseptic soaps, floor care and "Soaperior" liquid soaps. Included in the text are brief descriptions of products and appliances manufactured by the firm.

The brochure on "Soaperior" liquid soaps carries a flow sheet and presents all details from the melting out of the oils from tank cars to the filling process. Those interested may obtain copies of these brochures upon request.

Liquid Soap Facts

The third printing of its circular, "Important Facts about Liquid Soap", was announced recently by Moore Brothers Co., New York producers of soap dispensers. Facts on the use of liquid soap, percentages for various types of uses, the number of hand washes one gallon of liquid soap will provide and other pertinent data are in-

The balletin is free and sanitary supply distributors may obtain as many copies as they need by writing to Moore Brothers at 100 Waren St., New York 7, N. Y.

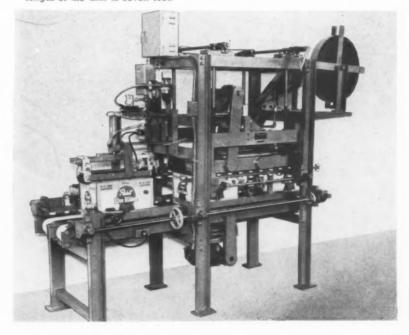
Trade Names, Synonyms

Chemical Trade Names and Commercial Synonyms by Williams Haynes, D. Van Nostrand Co., New York. 1955, cloth, 91/4 by 61/4 inches, 466 pages, price \$8.00. The second edition of this well known list of coined generic names, commercial synonyms and abbreviations, and company trade name was published recently. The volume covers over 25 per cent more items than the first edition which was published in 1951. Terms listed include chemicals and chemical specialties used in the industrial field, excluding consumer products. Most listings give composition and chief uses, and in the case of trade-named products, the manufacturer, whose address is listed in a separate index. More than 20,000 chemicals and related materials are identified.

Chemical Mfg. Costs

Chemical Engineering Cost Estimation by Robert S. Aries and Robert D. Newton, McGraw-Hill Book Co., New York, 1955, cloth, 91/4 by 61/4 inches, 263 pages, price \$6.00. This is a second, enlarged and revised edition of a volume published in 1950. Principles of cost estimation and evaluation are outlined and quantitative data for application of these principles to the solution of modern industrial problems are supplied. This well organized volume is intended for management as well as for engineers or chemists. While most of the information is of timeless usefulness it is hard to understand why 35 pages have been devoted to a list of prices of chemicals. Literature references are appended to each chapter.

New automatic single strip tape sealer of General Corrugated Machinery Co., Palisades Park, N. J. The machine tapes 25 or more cases per minute, single strip top and/or bottom flaps only, plus end panels as required. Minimum length of the unit is seven feet.



these two

NOPCO HYONICS

offer a hard-to-find combination of properties

HYONIC FA 75

(a 70% active modified fatty alkylolamide)

... tolerates substantial quantities of alkaline builders and remains stable

... gives 50% to 100% more foam

... highly soluble in electrolyte solutions, which will not cause insoluble precipitation, even at fairly high concentrations

> ... particularly suitable for liquid products where anionics are required to gain complete solubility and stability

HYONIC FA 40

(a 100% active nonionic alkylolamide)

...has extreme thickening action, which gives attractive body to liquid detergents at low solids concentrations

...non-corrosive. Allows finished formulations to be packaged in plain metal containers

...high foaming...outstanding detergency in the presence of phosphate builders

...highly resistant to precipitation by calcium ions

SOME TYPICAL FORMULATIONS

Window Cleaner
Methanol ... 5%
Isopropanol .. 5%
HYONIC FA 75 1%
Water89%

Bar Glass Cleaner HYONIC FA 75 20% Water80% Liquid Scouring
Concentrate
HYONIC FA 75 11%
Soda Ash... 6%
Sodium Tripolyphosphate ... 5%
Water 78%

SOME TYPICAL FORMULATIONS

Emulsion Cleaner Stoddard's Solvent45% HYONIC FA 40 5% Water50% Bodied
Soap Shampoo
Potash Vegetable
Soap 7%
HYONIC FA 40 3%
Sodium Tripolyphosphate ... 2%
Water 88%

Household Floor Cleaner HYONIC FA 40 7% Sodium Tripolyphosphate . . 5% Anionic Detergent (variable) . 3% Water 85%

The above are but two of Nopco's fast-growing list of "families" of detergent aids. Others include 100% active, nonionic, ethylene condensates, also 100% active lauric acid alkylolamide condensates. Nopco's technical men

will work with you to the fullest to help give your detergents many practical, saleable advantages. For full information write today. Nopco Chemical Company, 788 Industrial St., Harrison, N. J.



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DETERGENTS

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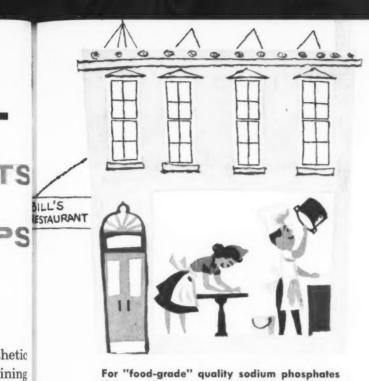


For sodium phosphates that bring to commercial cleaners the ultimate in efficiency . . .

The remarkable efficiency of synthetic detergents and industrial cleaners containing Victor sodium phosphates has been proved beyond question . . . in millions of homes, in every type of commercial application. Whatever the end use of your product-from laundering the most fragile fabric to the cleaning of railroad cars—there is a Victor chemical to help do the job better, faster, more economically. The ultimate in purity, exceptional properties of water softening and peptizing are among the many qualities of Victor phosphates that contribute to this superb performance. Is there a detergent problem facing you? If so, write us-confidentially, without obligation -and learn why so many soapers insist -it pays to see Victor. Victor Chemical Works, 155 N. Wacker Dr., Chicago 6, Ill.

...it pays to see

sodium



For "food-grade" quality sodium phosphates that meet the exacting cleaning requirements of restaurants, hospitals, etc. . . .

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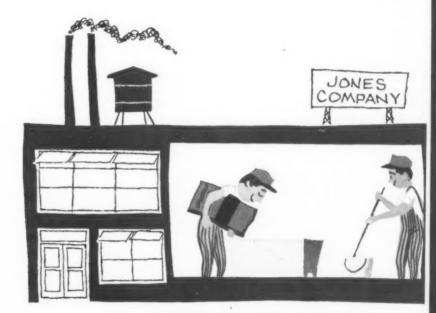
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mate water many ibute ere a write ation insist forks, 6, Ill.



For sodium tripolyphosphate as a stabilizer in dry, sodium perborate bleaches . . .



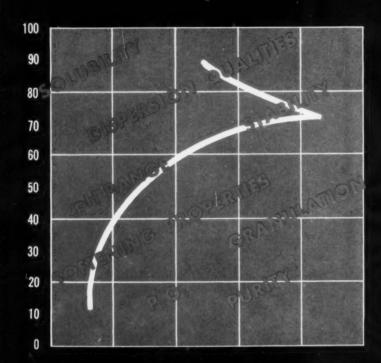
For trisodium phosphate and tetrasodium pyrophosphate—the best formula for heavy-duty industrial cleaning jobs . . .



r sodium tripolyphosphate that gives detergents for home use unequalled around cleaning efficiency in hundreds of applications . . .



NEW VICTAFILE of Phosphate Characteristics



Here is a valuable file of information designed to help you with formulation problems. Complete with graphs on "tetra" and "tripoly" plus handy data sheets on all the other phosphates used in the production of detergents and soaps. A wonderful addition to your library. Send for your copy today.





Please send the free Victafile for the Detergent and Soap Industry.

Company___

Address

City_

State

Your Nam

Please send sample of Victor

─ We have a particular problem. If there's no obligation, please have technical service representatives call.



Products and PROCESSES

Germicidal Detergent

A detergent, saponaceous or non-saponaceous, is combined with a germicidal agent consisting of from 0.2 to 10 percent by weight of 2.4-dihalogenated symmetrical metaxylenol or its alkali metal salts. The germicidal ingredient may be added to the detergent at any stage in the manufacture of the latter which will permit uniform distribution of the additive throughout the mass. Before being added the germicide may be dissolved in a suitable solvent such as alcohol or acetone. British patent 735, 343, 1955, R. Haldane & Co., Glasgow.

Mechanics' Hand Paste

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Detergents in paste form are preferred by workers in Polish factories. A typical product intended for washing very soiled hands is described: 40 percent soap made from fatty materials (16 percent fatty acids); 41 percent mechanical abrasive; eight percent solvents, half of which are technical grade turpentine oils; five percent water; and six percent of an emollient such as glycerol or lanolin. A. Przyszcypkowski and M. Krazyakowa (Zaklad Przemyslu Kosmetycznego GIPRIS, Warsaw) Prace Glownego Inst. Przemyslu Rolnego i Spozywczego 3, No. 3, 48-50 (1954), through Chem. Abstracts, vol 49, p.

Soap Syndet Combination

A combination of non-ionic detergent and soap is said to combine good cleansing power with good lathering properties in salt and hard water. It is made from a mixture of commercial grade stearic acid, sulfonated fatty oil, sodium or potassium silicate, caustic soda and/or potash, a non-ionic surface-active detergent, and water, with or without sulfonated fatty alcohol. The respective properties of the ingredients should result in a fatty acid content within the range of four

to 18 percent. British patent 734982, 1955, H.F. Johnston, Natal, South Africa.

New Refining Process

A process for producing super-refined benzene, toluene, and xylene from light oil was made available recently for the first time in this country by Koppers Co., Pittsburgh, Pa. Rights to this process were acquired by Koppers from the German firm which first developed this process and has had it in commercial operation for several years. Thiophene content is reduced to less than one part per million by this method, and by subsequent removal of paraffins a solidification point of 5.40°C may be attained, according to W. C. Rueckel, vice president and general manager of the engineering and construction division. Equipment for use with this process is said to be easily installed and eliminates the need for acid washing of light oil fractions.

Fuel Oil Gel Inhibitors

Formation of copper mercaptide gel in fuel oil systems can be inhibited with a combination of "Santolenes" it was found recently by Monsanto Chemical Co., St. Louis, Mo. Mixtures of "Santolene H" and "Santolene C" in ratios of 2:1 to 10:1 have been found to minimize gel formation when used in concentrations of 25 to 60 pounds per thousand barrels, depending upon base fuel. The mixtures were found effective in fuels produced from both mid-continent and Middle East crudes.

Tergitol Anti-Fog Brush

A "Tergitol" saturated pad is mounted on the handle of a new auto brush for winter drivers. The driver rubs the inside of his windshield with the pad and it remains fog-free for many hours, according to Carbide and Carbon Chemicals Co., New York, maker of "Tergitol" nonionics. In addition to the pad, the 24-inch brush handle features a removable non-scratch frost and ice scraper. The "Sno-Off" brush itself has plastic bristles, is made by Osrow Products Co., New York, and comes in three colors—red, yellow, and blue. The device retails for \$1.00 in department, hardware, and automotive stores. "Sno-Off" is featured in the January issue of *Chemical Progress*, publication of Carbide and Carbon.

New Iron Sequestrant

"Saccharol" is a new iron sequestering agent introduced recently by Reading Testing Laboratories, Inc., Reading, Pa. At a concentration of 0.2 percent the product was found to be effective at pH ranging from four to 12 and in the present of two percent sodium hydroxide. The precipitate formed is said to exhibit good stability. Although primarily designed for sequestering iron, "Saccharol" has some calcium sequestering value. Prices per pound run as follows: one drum (600 pounds net) 19 cents; 10 drums (6000 pounds) 17 cents; and 40 drums (24,000 pounds) 15 cents. In less than drum quantities add 5 cents per pound for repacking.

New Emery Lubricants

Two new lubricant esters are now available on a commercial basis from Emery Industries, Inc., Cincinnati, it was announced recently. Both are diesters of azelaic acid. "Emolein 2957" is the isooctyl ester, "Emolein 2958" the di-2-ethylhexyl ester. Major advantages claimed to result from the use of these esters in compounded lubricants include the following: good viscosity-temperature relationships; high viscosity indexes; stable low-temperature viscosities; good lubricity; stability to oxidation and thermal conditions; low sludging and coking; good additive response; high flash and fire value and low evaporation; ready availability from domestic source materials.



SINCE 1768 the House of Chiris has dedicated itself to the Fifth Sense. In the development of Essential Oils, Floral Absolutes, Chemical Isolates, Synthetic Chemicals, and all those creations and specialties which combine industrial aromatics with natural products and produce fragrance, the House of Chiris has a cherished history. Today Chiris maintains laboratories headed by experienced chemists who have available to them not only the accumulated knowledge of generations of Chiris perfumers and chemists, but also the research facilities of five modern laboratories located in Grasse and Paris, London, Sao Paulo (Brazil), and New York City. Whether Essential Oils, Isolates, or combinations thereof, are used as fragrance constituents by the perfumery, soap, cosmetics or allied industries, we are happy to be consulted.

Replica of perfume bottle used in the year 1768

ANTOINE CHIRIS CO., INC.

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SOAP PLANT Observer

By John W. McCutcheon

ASIC Research in the Field of Fats," a commentary by A. S. Richardson in the November issue of the Journal of the American Oil Chemists' Society, should prove thought provoking to all oil detergent chemists. The step by step advance in most departments of fat research is termed satisfactory. Much of this advance is attributed to the scientific equipment placed at the chemist's disposal by modern instrument makers.

"Many chemical research organizations would suffer collapse if they were suddenly deprived of all instruments less than 10 years old." Dr. Richardson contends. These are strong words indeed and would not be easily accepted if they came from an executive and chemist of lesser stature than the author. He sounds a note of warning: "I can barely refrain from saving that the satisfactory progress of research in our field has been accomplished with no display of outstanding imaginativeness." The small accomplishments of many people have built the basic research picture.

The fat and oil chemist takes many things for granted today that a few years ago were not so evident. One of the reasons for this is the wide variety of excellent tools with which he has to work. One thing that annoys the writer immensely is the disparaging remarks some non-technical people love to make about "laboratory gadgets." Of course, a piece of equipment purchased without due consideration of its use is indeed a "gadget." But fundamentally, it is on just such "gadgets" of the past that the chemical business of today is based. When a chemist today is asked the composition of coconut oil he reaches for a handbook. It makes interesting reading to go back a few years and note what a struggle it was to get those



figures together. See, for example, articles by G. S. Jamieson in the *J.A.C.S.*, around 1920-22, when vacuum distillation methods were first applied in earnest to fat composition studies.

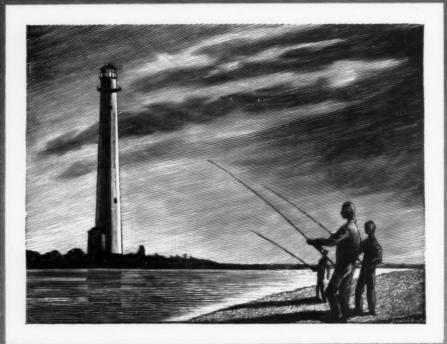
But Dr. Richardson goes one step further in his remarks than the above would indicate. Research requires imagination in addition to the mere use of tools. The plodding chemist accomplishes something, but the man who can apply imagination to his work as well can accomplish much more. The writer believes that the application of nuclear mechanics to fat and detergent research should prove one of the most lucrative tools available to the industry since the invention of the balance.

THE testing, analysis and evaluation of detergents is of prime importance to any manufacturer and user of these materials. The procedures are much more complex than they are for soap, and even the latter provide plenty of headaches. What increases the difficulty is the vast number of products available, particularly the variety of products within a single type. For example, a polyethylene ether of an alkyl phenol may be available in almost unlimited variety depend-

ing on how many moles of ethylene oxide are added. Commercial types in the recent listing cover products from a few moles up to 20 and over. In addition, the alkyl phenol may be varied, as for example, triisobutyl phenol, iso amyl phenol, etc. Each would give rise to a new series of products. Fortunately for the sanity of the analytical research chemist, a general trend has developed toward standardization of types, for the simple reason that certain combinations have proved most useful commercially. Knowledge of a detergent's end use is often an indication of its general type, so that a few general tests puts one well along the road to identification. For example, an agricultural emulsifier stable to alkali but indifferently stable to acids, non-ionic and cheap, might suggest an ethylene oxide thio ether derivative. If tall oil were suspected, a test for rosin would be in order. Snap judgments, however, should be avoided. Confirmation is always necessary.

There are quite a few schemes for analysis of the pure detergent which are of great help. A few, brought to the writer's attention by his friend and associate Robert McCulloch, head of Textile Laboratories in Paterson, N.J., are well worthy of study. For example: "Qualitative Analysis of Textile Processing Agents," by H. B. Goldstein, Am. Dyestuff Reporter, Nov. 3, 1947, gives a very useful table on page 637 tying specific tests to about a dozen principal types of detergents. Also, "A Scheme of Analysis for Commercial Detergents," by J. A. Gilby, et. al, Manufacturing Chemist, Oct. 1950, pp. 423-26. This article has been previously reviewed in this column. Finally, "Classifying Detergents," by I. V. Karabinos, et. al, Soap and Chemical Specialties, June 1954, pp.

The interesting point of these studies (and, of course, there are many more in the literature) is the fact that each treats the subject from a different point of view. In fact, it is very doubtful if any single



BARNEGAT LIGHT is located on Island Beach at the south side of the entrance to Barnegat Inlet, New Jersey. For more than a century its beacon has been a familiar course-marker to all craft traveling the steamer lanes off the Jersey coast. The first lighthouse, built in 1835, was leveled by a pounding Atlantic. The present tower, 161 feet high and made of brick, was completed in 1858, 900 feet south of the original structure. The tower itself is now owned by the State of New Jersey but the light is maintained by the U. S. Coast Guard.

Lighting Ways to Progress and steady growth in the field of electrochemicals is the Niagara Alkali Company—a pioneer in the development, production and use of these important products. Rely on Niagara for uniformly high quality in Nialk® Liquid Chlorine, Nialk Caustic Potash, Nialk Carbonate of Potash, Nialk Paradichlorobenzene, Nialk Caustic Soda, Nialk TRICHLORethylene, Niagathal® (Tetrachloro Phthalic Anhydride).

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classification could be devised that would meet all individual requirements. The analyst must be left to choose and pick his way through the labyrinth of standard methods available for the sake of time and economy of cost. Making a series of tests followed by quantitative work may easily run into many hundreds of dollars per sample. For the smaller organization depending on outside help, this can often be prohibitive. It is important then for the analyst to decide whether the examination will be all-inclusive. just a look see, or something, between these two extremes. The decision may well rest on factors outside the analysis of the detergent itself. For example, a metal cleaner may have certain exceptional properties that are basically independent of the detergent used. The inorganic salts might be the big factor. Perhaps several types of detergents would work equally well. It is even possible that the one chosen was used because it was handy, cheap or recommended by a friend. Obviously the first step to this problem would be to run evaluation tests of a nature similar to those given in the book, "Detergency Evaluation and Testing" by J. C. Harris, Interscience Manual No. 4. 1954. Once the importance of the detergent itself is established, then the degree of analysis to be done and its accuracy must be decided.

Next month, this study will be concluded with a few specific references to typical cases.

RECENT article on fat splitting was noted in the Aug. 1955 issue of Riechstoffe Parfume Seifen, p. 8-13, by B. G. Martinenghi. Discussed is the process of the Italian firm Fratelli Gianazza of Milan. The process follows the Colgate-Emery splitting operation adapted to pressures of about 300 psi and with a pair of intermittent type autoclave splitters. The lower percent split obtained, ranging from 92.8 to 97.4 percent, would appear to make the process uneconomical from an American point of view.

Letters

(From Page 31)

one's nerves.

All in all this is to express my sincere appreciation for the fine work you have done and for the high principles which you uphold and support.

> WALTER MANNHEIMER, Vice-President, Miranol Chemical Co., Irvington, N. J.

Naturally, we are pleased to have Mr. Mannheimer's comments on our editorials. Regarding the editorial on survevs in our December issue we should like to point out that we were not referring to the fine ones conducted by C.S.M.A. and other associations and individual companies in the field we cover. We were referring mostly to the consumer type surveys conducted by people who don't know the markets, the products or the consumers they are studying. Frequently we are the first to be called by some advertising agency seeking all sorts of information on products or markets. The information is then duly served up to a client for a fancy fee, based almost exclusively on what the agency or other surviving outfit has learned from the trade press. Ed.

Worst Technical Article

Editor:

I wish to call your attention to the numerous errors in the following article; Haworth, D. T., Koch, J. R., and Surak, J. G., Soap and Chemical Specialties, 31 No. 10, 169 (1955).

Paragraph one. This paragraph is almost completely inaccurate. Carbon-14 tagged wax components of high specific activity are readily available from several firms. Irradiation of wax in a reactor would be a very poor method of inducing carbon-14 activity. Carbon-14 decays by beta particle emission not by alpha particle emission. Carbon-14 is one of the most widely used radioisotopes and the health hazards involved in handling it are not excessive.

Paragraph two. A Geiger-Mueller tube is only about five percent efficient for gamma rays. A scintillation counter would be more suitable for cobalt-60 gamma rays. Sentence five is meaningless. Sentence seven does not explain how a surface of four square inches is counted. Standard Geiger-Mueller tubes are not large enough to count a total surface area of this size.

Paragraph three. The statement, "radioactivity follows the inverse square law," is incorrect. Radioactive decay is logarithmic.

Paragraph four. The use of cobalt-60 is not unique. Many investigators have used this isotope.

Paragraph five. The definition of a millicurie is 3.7×10^7 disintegrations per second not 3.7×10^{10} counts per second.

Paragraph seven. Sentence structure, tense, and general clarity are poor.

Paragraph nine. Background count includes more than cosmic radiation. The testing methods used are anything but clear.

Paragraph ten. How can the gloss of a surface be obtained and correlated to activity? I fail to understand what this paragraph is describing.

Paragraph eleven. I fail to see anything from the above material.

The entire article is poorly written, poorly organized, and poorly explained. It is the worst technical publication I have ever read.

Dr. F. H. Firsching, Painesville, Ohio.

Ouch! Ed.

Soap Is His "Bible"

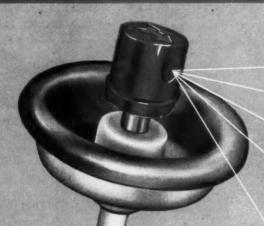
Editor:

As you know we are subscribers to SOAP and have been for the past 15 years. We have a complete file of copies going back to 1939. Since this is such an important "Bible" of the industry, I have the magazine mailed to my home first where I have more time to read each issue from cover to cover.

Many thanks to you for a fine publication covering our industry. Please keep up the good work.

DON PEATEE, President, Mellocraft Co., Toledo, Ohio

THE Aerosol Valve FOR



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JANUARY, 1956

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Harry E. Peterson



Robert J. Peterson



Edward C. Hegeler



Julius W. Hegeler



John K. Shea



Montfort A. Johnsen research director

All are comparatively young in years but old in experience gained primarily from positions and responsibilities in the filling industry.

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Offering a new service in contract filling all types of containers

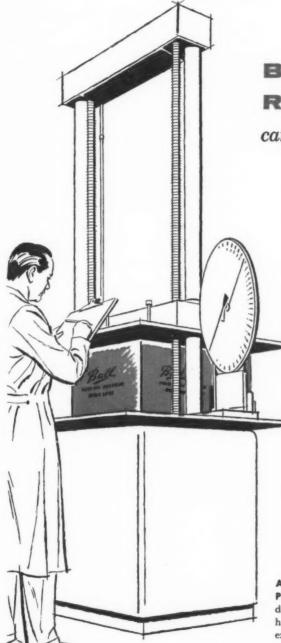


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One Ball customer reduced average bottle shipping-breakage by 55% per car and their average damage claim (in dollars) by almost 46% over the previous year. A factor which contributed greatly to these reduced costs was a new shipping case which Ball's practical packaging men helped develop. And this new carton actually cost less than the one it replaced . . . Another instance where it paid to "call BALL first of all."

Ask about other Ball "Packaging Plus" Services . . . glass container design; technical counsel on materials handling, processing and filling—with experts in each area who can help you reduce costs or increase profits.



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If your product can be sprayed...

CONTINENTAL HAS AN AEROSOL CAN TAILOR-MADE FOR YOU



DOME TOP — Domes attached and equipped with standard 1" curled opening for all popular valves. Regular (12 oz.) or Midget (6 oz.).



CONCAVE TOP—Tops furnished loose and perforated with hole-punch for specified aerosol valves. Regular (12 oz.).

More than 60 sprayable non-food products are now sold in Continental's three styles of aerosol cans. One of these containers will fit the exact needs of your product too. As part of Continental's Tailor-Made Package Service, we provide on-the-dot deliveries of all the cans you can use. Individualized engineering and master lithography are available...and so are contacts with valve suppliers and commercial fillers. It'll be a pleasure to advise you in any phase of your packaging operations. Why not call Continental at your convenience?



DOME TOP — Domes furnished loose and perforated with hole-punch for specified aerosol valves. Regular (12 oz.) or Midget (6 oz.).



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ackaging NOTES

Canco Names Two Execs.

Roger F. Hepenstal has been elected treasurer of American Can Co., New York, it was announced



Roger F. Hepenstal

recently by William C. Stolk, president. Mr. Hepenstal succeeds Edmund Hoffman, secretary and treasurer for the past seven years and with Canco for 42 years. Mr. Hoffman will continue to serve the firm in an advisory capacity.

Mr. Hepenstal had been vicepresident in charge of manufacturing since 19551. He started with Canco 30 years ago as a machine operator in the Fairport, N.Y., plant. Prior to his election as vicepresident he had served successively as manager of manufacture in the firm's Atlantic division and as

John R. Henry



JANUARY, 1956

assistant general manager of manufacture for the company. During 1954 Mr. Hepenstal took a leave of absence to serve as director of cataloging, standardization and inspection in the office of the Secretary of Defense in Washington. D.C.

At the same time John R. Henry, Canco's general attorney since 1950, has been elected secretary and general counsel. The youngest man in Canco's executive group, he joined the firm as an attorney in 1946.

Nordstrom in New Post

The Folding Paper Box Association of America, Chicago, has appointed Gustav L. Nordstrom as executive director, effective the first of this month. Mr. Nordstrom, formerly executive secretary of the National Paper Box Manufacturers Association, Philadelphia, succeeds A. E. Murphy, who is retiring after 22 years service. Mr. Murphy has been with the Folding Box Association since its inception and continues in an advisory capactiy as special assistant to the president. Mr. Nordstrom joined the Philadelphia group in



Gustav L. Nordstrom

Gair Shifts W. G. Young

Robert Gair Co., New York, last month transferred Warren G. Young from its Thames River Division, Uncasville, Conn., to the Chicago folding carton sales office where he will aid in the establishment of a retail carton department. Mr. Young joined Gair in 1949.

Vulcan Sales Meet

The expansion and progress of Vulcan Steel Container Co., Birmingham, Ala., were described and analyzed at a recent sales conference by Gordon D. Zuck, president and Ray I. Mitchell, sales manager. Others attending the conference in-

cluded Paul A. Jones, plant manager: Ruth Janet Brown, personnel director; Weyman Snuggs: Charles E. Baker; David Baker; Carlyle West; Fred Palmer; Robert Sheahan; William Tate; James Williams; Robert Crump; William Palmer: and Michael Long.

Photo taken during recent sales conference of Vulcan Steel Container Co





... if you have an aerosol project

... if you have an aerosol problem

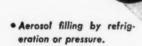
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- Aerosol packaging in metal, plastic, and glass containers.
- Aerosols as sprays, foams, powders.
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Oldshue in New Post

Mixing Equipment Co., Rochester, N. Y., last month announced the advancement of James



Dr. James Oldshue

Y. Oldshue to the position of director of research. Engaged in fundamental and applied research in fluid mixing since joining the firm in 1950, Dr. Oldshue served as head of development engineering prior to his recent appointment. He holds B. S., and Ph.D. degrees from Illinois Institute of Technology and served at Los Alamos Scientific Laboratories during World War II. He conducts a graduate course in fluid mixing at the University of Rochester.

J. H. Rushton, professor of chemical engineering at Purdue University, and long associated with Mixing Equipment Co.'s research and development, continues as a consultant to the research staff.

New Oblong Can

A new oblong can for hardto-package liquids was introduced by American Can Co., New York, at the 42nd annual meeting of the Chemical Specialties Manufacturers Association, last month. Claimed to be the first solderless oblong can on the market by C. S. Stephens, general sales commodity manager, it comes in quart and pint sizes. Special features include a clinched nozzle, which prevents corrosion and flux splashes, and allows a lithographed top. Another feature is a no-drip spout with outward curl on the neck, which is an improvement

in the packaging of corrosive products, The enamel lining and compact stackability, and a cemented side seam which permits lithography all around the can, are other advantages offered by this new Canco product.

New Tape Sealer

A new automatic single strip tape sealer was announced recently by General Corrugated Machinery Co., Palisades Park, N. J. The machine tapes 25 or more cases per minute, single-strip, top and/or bottom flaps only, plus end panels, as required. Minimum length of the unit is seven feet.

Ham in Flex-Vac Post

Harold A. Ham has been named to the newly created position of general manager in charge of manufacturing at the Flex-Vac Division of Standard Packaging Corp., Clifton, N. J. Mr. Ham succeeds H. T. Holbrook who has been appointed vice-president in charge of the company's expansion and growth in packaging and related fields.

Prior to joining Flex-Vac, Mr. Ham had been associated with Hoffmann-LaRoche, Inc., Nutley, N. J., as director of pharmaceutical production: with Lehn & Fink Products Corp., New York, as general factories manager; and with Pepsi-Cola Bottling Co., as assistant to the vice-president in charge of operations.

Barnett to Wilson Glass

Raymond Barnett has joined J. W. Wilson Glass Co., Brooklyn, N. Y., as general sales manager, effec-



Raymond Barnett

tive January 1, it was announced recently by Griffin Crafts, president. Mr. Barnett will also manage and co-ordinate sales of Wilson Plastic Container Corp. and Baltimore Metal Products, Inc. He resigned recently as vice-president of Old Empire, Inc., Newark, N.J.

Conveyor Group Elects

E. E. Boberg, vice-president in charge of sales for Standard Conveyor Co., North St. Paul, Minn., was elected recently as president of the Conveyor Equipment Manufacturers Association at the group's 22nd annual meeting in White Sulphur Springs, W.Va. He succeeds

(Turn to Page 83)







New packaging for its line of para-chlorophyll deodorizers was announced recently by Click Chemical Corp., Mount Vernon, N. Y. Three blocks with wire hangers are packaged in colorful folding box by Downington Paper Box Co., Downington, Pa., to retail for 29 cents. In addition to increasing unit sales, this type of packaging reduces product deterioration and cuts pilferage.



New, all-purpose waterless hand cleaner, "Lan-O-Let," was announced recently by Braun Laboratories, Philadelphia. Packaged as an aerosol product, the cleaner is squirted on hands, rubbed in, and then removed with paper towel or cloth. Product contains lanolin and "Actamer," germicidal ingredient of Monsanto Chemical Co., St. Louis. "Lan-O-Let" retails for 98 cents a can.





"Oxydol" detergent with "oxygen bleach" was distributed nationally last month by Procter & Gamble Co., Cincinnati. A heavy duty detergent, claimed to be the first to have its own built-in bleaching agent, the product is packaged in a 20-ounce regular size and a giant 49-ounce size.



The complete line of "Raid" insecticides by S. C. Johnson & Son, Inc., Racine, Wis., is now being introduced nationally to wholesalers and retailers. The "Raid" aerosol is a 12-ounce unit that retails for \$1.59. The three other Johnson insecticides include "Raid Moth-Proofer," "Raid Insect Spray" and "Raid Roach and Ant Killer."

MEMS.

New liquid detergent designed for washing woolens, cashmeres and similar fabrics was announced recently by Buckeye Formulas, Inc., New York. The new detergent, called "This," comes in eight-ounce glass bottle to retail for 98 cents.





"Tide" is now attired in newly designed package, Procter & Gamble Co., Cincinnati, announced recently. Big change is the emphasis on use of the detergent in automatic washers Copy on right tells how to use "Tide" in top loading automatic washers. Also changed is the "Tide girl."

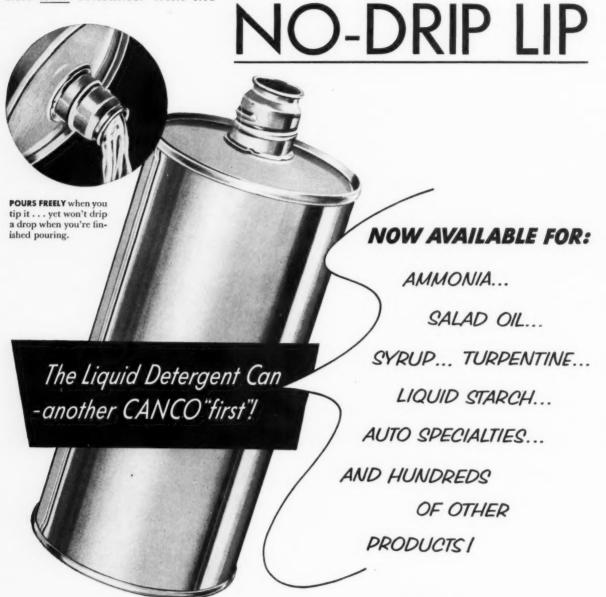
Completely redesigned bottle label for its "Vani-Sol" concentrate bowl cleaner was introduced recently by National Laboratories, Inc., Toledo. Changing from rectangular to more modern free-form design, special emphasis has been directed toward producing a simple and easily recognized layout. To add to label's attractiveness, three colors (red, white and blue) are used instead of the two on the older label. Bottles are supplied by Owens-Illinois Glass Co., Toledo.

New "Ease-Ax" oven cleaner of Baldwin Products Co., Baldwin, N. Y., is thick white paste for 30 minute removal of baked-on, hard-encrusted grease and burned-on food. Product may be applied to all types of surfaces. It is available in pint and half-pint sizes, both with applicator attached. Screw caps are by Crown Cork & Seal Co., Baltimore.





If you manufacture...distribute...or sell any one of the products mentioned below—or products like them—read this message about this new container with the



The nozzle is completely dripless—the first of its kind—a feature developed by Canco research. But that's only one of the many advantages this new can provides.

Its side-seam construction permits full decoration all the way around. It's quicker, easier, cheaper to fill than glass. And of course, it's lightweight . . . easy to handle . . . can't break.

If you have a product that's liquid, write and tell us about it. Chances are, some variation of this new dripless can will suit you better than your present container.



AMERICAN CAN COMPANY New York, Chicago, San Francisco

Jervis C. Webb, president and general manager of Jervis B. Webb Co., Detroit.

Other officers are: J. H. Walker, president, Fairfield Engineering Co., Marion, Ohio, vice-president; Adrian W. Rich, president, Fairmont Machinery Co., Fairmont, W.Va., treasurer; H. E. Murken, manager, conveyor sales, Hewitt-Robins, Inc., Stamford, Conn., secretary; R. Y. MacIntyre, manager, industrial division, Continental Gin Co., Birmingham, Ala., F. J. Shude, president, Anchor Steel & Conveyor Co., Dearborn, Mich., and D. E. Davidson, vice-president, Link-Belt Co., Chicago, directors. R. C. Sollenberger was reelected executive vice-president to head up the association's office in Washington, D. C.

Folding Carton Competition

"America's 100 best folding cartons" will be chosen at the 11th annual folding carton competition sponsored by the Folding Paper Box Association of America. The event will be held in San Francisco in connection with the association's 1956 convention March 10-12. Selection of prize winners will be based on technical superiority of printing, superiority of construction; potential new volume use; and general superiority according to end use. After being displayed at the convention, all entries will be shown in Chicago and New York, and prize winners will be exhibited in major cities across the country, it was announced by John C. Newell, Jr., the association's director of public relations.

Glass Co. Officers

Election of five officers for Carr-Lowrey Glass Co. and its subsidiary, Swindell Brothers, Inc., both of Baltimore, was announced last month by William V. Fisher, president of the two firms' parent company, Anchor Hocking Glass Corp., Lancaster, O. John H. Funkey was elected president of Carr-Lowrey Glass Co. to succeed the late George F. Lang. At the same time Mr. Funkey was elected president and a director of Swindell Brothers. Prior to his recent election he was a vice-president of Carr-Lowrey which he joined in

Newly elected treasurer of Carr-Lowrey in addition to his du-



Stackability, a new feature of American Can Company's oblong container, is the center of interest as Herman E. Reinhardt Jr. (left), general purchasing agent of American Home Products Corp., New York, and T. E. Alwyn, vice-president in charge of Canco's Atlantic division operations, meet at the Canco exhibit at the Chemical Specialties Manufacturers Association meeting in New York. A recess in the center bottom of the can permits compact stackability and allows for better display and better storage and shipping.

ties as vice-president and secretary is C. R. Hilgenberg. He has been with the firm since 1929. J. J. Jeffries, becomes assistant treasurer of Swindell in addition to his responsibilities as vice-president and secretary. He started with Swindell in 1910. W. J. Burt, with Carr-Lowrev for 28 years, was named assistant treasurer in addition to being assistant secretary. At the same time Cyrus L. Fulton was elected a director of Carr-Lowrey Glass Co. and of Swindell Brothers. He is vice-president in charge of finance and a director of Anchor Hocking.

Steel Drums Record Seen

Steel shipping container output in 1955 is estimated to have reached over 100 million units, according to a recent statement by Livingston Keplinger, president of the Steel Shipping Container Institute. Most of this output consists of 55 gallon drums and five gallon pails. The last year to see production reach 100 million units was 1951, when the Korean war boost-

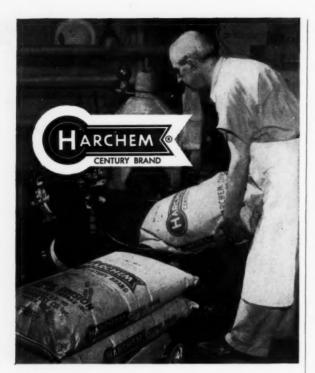
ed container requirements.

The 1955 estimated figure represents a total shipping capacity of over two trillion gallons, composed of 24 million heavy gauge drums, 8.5 million light gauge drums, and 72 million pails. Comparable figures for 1954 were: 22 million heavy drums, 7.7 million light drums, and 67 million pails.

Mr. Keplinger said that 1956 production may reach over 110 million units, the highest level in 10 years. He cautioned, however, that a tight sheet steel supply may curb production. Approximately one million tons are required annually by the container industry, second only to the automotive industry's consumption,

New Dripless Can

A new liquid detergent can featuring a dripless nozzle was placed on the market recently by American Can Co., New York. In addition to the "no-drip lip" the can has side-seams of a construction permitting decoration all the way around.



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Folding Box Record in '55

The folding box industry turned over a record \$800,000,000 in 1955, according to a statement by Leonard Dalsemer, executive vice-president of Lord Baltimore Press. In his year end statement Mr. Dalsemer attributed this expansion to the growth of supermarkets and the concomitant demand for cartons and packages with a strong sales impact. In the last decade the volume of the paper box industry has almost quadrupled. Together with the \$200,000.000 gross reported for the closely allied flexible packaging and label field, this is a billion dollar industry, according to Mr. Dalsemer,

A method for the standardization of the respective dimensions of flaps and tucks of all size cartons was also announced. The method will simplify packaging by modern high speed machinery. Lord Baltimore will make this development available to customers and other manufacturers.

Gair Advances Harvey

Charles U. Harvey has been advanced to general sales manager of the container division of Robert Gair Co., New York, it was announced recently by William T. May, Jr., vice-president in charge of container operations. Mr. Harvey succeeds John H. Macleod, who will continue with Gair in the container division as sales manager of national accounts. Mr. Harvey was founder and president of the Harvey Container Corp.. Plymouth.

Charles U. Harvey



Mich., when that firm was acquired by Gair early in 1955. At that time he was appointed district manager of Gair's central western district.

Flett Heads ACS Div.

Lawrence H. Flett of National Aniline Division, Allied Chemical & Dye Corp., New York, was elected last month as chairman of the American Chemical Society's division of chemical marketing and

economics for 1955. Mr. Flett succeeds Hal G. Johnson of Monsanto Chemical Co., St. Louis, Mo., in the ACS post. Carlton A. Sears, assistant technical director of the agricultural chemicals division of American Cynamid Co., New York, was named chairman-elect and A. M. Whitney of Davison Chemical Division of W. R. Grace & Co., Baltimore, was reelected secretary-treasurer.





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NEW Erade Marks

THE following trade marks were published in recent issues of the Official Gazette of the U. S. Patent Office in compliance with section 12(a) of the Trade Mark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. See rules 20.1 to 20.5. As provided by section 31 of the Act, a fee of \$25 must accompany notice of opposition.

Shine—This for cleaning and polishing preparation. Filed Feb. 3, 1955 by Rapp-Ramsey Co., Shenandoah, Iowa. Claims use since Dec. 1, 1954.

Sprayola—This for aerosol type shoe polish spray. Filed Mar. 18, 1955 by Laird K. Rhodes, Shawnee-on-the-Delaware, Pa. Claims use since June 2, 1954

"Kanite"—This for polishing and buffing compound. Filed Mar. 25, 1955 by Robert P. Kane, doing business as Maplewood Products, Malden, Mass. Claims use since June 15, 1954.

No-Nubbin—This for buffing compound. Filed Mar. 28, 1955 by Schaffner Mfg. Co., Pittsburgh. Claims use since on or about June 1, 1953.

U-Det 90-95—This for surface active synthetic detergent. Filed Sept. 22, 1953 by Universal Detergents, Inc., Long Beach, Calif. Claims use since Jan. 23, 1952.

Randu—This for all purpose detergent. Filed Apr. 16, 1954 by Rose Kusiel, doing business as Kusiel Chemical Co., New York. Claims use since January 1942.

Dri-Wash—This for impregnated cloth for cleaning the hands and skin. Filed Mar. 11, 1955 by G. H. Linton & Co., London, England. Claims use since October 1951.

Vi-Lan—This for antiseptic allpurpose skin cleanser, bowl cleaner and disinfectant and all-purpose concentrate cleaner. Filed Apr. 15, 1955 by Dameron Enterprises, Inc., Louisville, Ky. Claims use since Dec. 9, 1954.

Chlor-Tergent—This for chlorinated compound which cleans and sanitizes. Filed Apr. 15, 1955 by Oakite Products, Inc., New York. Claims use since Mar. 18, 1955.

D'wigos — This for soapless shampoo, hand soap cleaner, waterless hand cleaner, dry cleaner, etc. Filed Dec. 30, 1954 by Albert I. Wigler, Newark, N. J. Claims use since Nov. 11, 1935.

De-Oxin—This for powdered detergent particularly adapted for cleaning automotive vehicles. Filed May 9, 1955 by E. F. Drew & Co., New York. Claims use since Apr. 10, 1955.

Silver Kleen—This for chemical preparation for cleaning and polishing bright metals including gold and silver. Filed Apr. 18, 1955 by Kilgar Mfg. Co., Kansas City, Mo. Claims use since Dec. 28, 1954.

Marbelize—This for liquid floor and automobile wax. Filed Apr. 19, 1955 by William S. Brown, doing business as Brown Distributing Co., Kansas City, Kans. Claims use since Mar. 15, 1955.

PoliSeal—This for polish for motor vehicle bodies and furniture. Filed May 13, 1955 by H. & B. Distributors, Lyndhurst, N. J. Claims use since Feb. 2, 1952.

Gulf—This for wax treated dusting cloth, chrome polish, and wax polish for automobiles and furniture. Filed Mav 16. 1955 by Gulf Oil Corp., Pittsburgh. Claims use since on or about June 1, 1942 and since May 1925, on the last item.

Spin-Shine—This for shoe polish. Filed May 26, 1955 by K. J. Quinn & Co., Malden, Mass. Claims use since Mar. 4, 1955.

Camicide—This for insecticide. Filed March 9, 1955 by Campbell Chemicals, Inc., St. Louis. Claims use since Oct. 9, 1946.

Virisol—This for disinfectant. Filed Mar. 29, 1955 by Lehn & Fink Products Corp., Bloomfield, N. J. Claims use since Mar. 15, 1955.

Flexo—This for soap. Filed May 6, 1955 by Swift & Co., Chicago. Claims use since March 1954.

Fame—This for detergent composition for use in the home, on the farm, in industry, and in public service institutions. Filed Nov. 18, 1954 by Wyandotte Chemicals Corp., Wyandotte, Mich. Claims use since Apr. 4, 1952

Buckeye Clean Charge — This for dry cleaning detergent. Filed Mar. 21, 1955 by Davies-Young Soap Co., Dayton. Ohio. Claims use since Oct. 20, 1952.

K 2—This for composition used for cleaning and conditioning chalkboards. Filed Apr. 1, 1955 by New York Silicate Book Slate Co., New York. Claims use since Feb. 24, 1955.

King—This for soap. Filed May 11, 1955 by Andrew Jergens Co., Cincinnati. Claims use since 1892.

M'Lady—This for shampoo. Filed May 11, 1955 by M'Lady, Inc., Tuscaloosa, Ala. Claims use since Jan. 6, 1954.

Rainbow—This for hand cleaner and hectograph ink remover. Filed May 17, 1955 by Columbia Ribbon & Carbon Mfg. Co., Glen Cove. N. Y. Claims use since Dec. 27, 1937.

Sierra Pine-This for toilet

soap. Filed May 17, 1955 by Los Angeles Soap Co., Los Angeles. Claims use since May 10, 1939.

Dynahue—This for detergent composition primarily adapted for laundry use. Filed May 17, 1955 by Pennsylvania Salt Mfg. Co., Philadelphia. Claims use since Feb. 23, 1955.

Pruf—This for dry bleach. Filed March 31, 1955 by Colgate-Palmolive Co., Jersey City, N. J. Claims use since May 24, 1954.

Magic Roach Box—This for insecticide sold in a throw-away traplike container. Filed Apr. 19, 1955 by Ohio Valley Seed Co., Evansville, Ind. Claims use since September, 1930.

Wool-Charm—This for liquid detergent for wool products. Filed Aug. 16, 1954 by Irving Colbert, Long Island City, N. Y. Claims use since July 10, 1954.

Sulfopon—This for washing and detergent agents for use in washing preparations. Filed Jure 21, 1954 by Dehydag Deutsche Hydrierwerke GmbH, Dusseldorf, Germany.

Reardon's — This for hand cleaner, brush and roller cleaner and paint and varnish remover. Filed Oct. 7, 1954 by Reardon Co., St. Louis, Mo. Claims use since July 7, 1954, on brush and roller cleaner and paint and varnish remover.

after glo—This for liquid car wash. Filed Oct. 22, 1954 by Barcolene Co., Boston. Claims use since Aug. 20, 1954.

Fur Frost—This for demothing and cleaning fluid. Filed Mar. 25, 1955 by White Frost Chemicals, Inc., New York. Claims use since Dec. 29, 1954.

A-27—This for industrial cleaning composition. Filed May 24, 1955 by Pennsylvania Salt Mfg. Co., Philadelphia. Claims use since Mar. 5, 1953

D-Lite—This for hand dishwashing compound containing no soap. Filed Aug. 18, 1955 by DuBois Co., Cincinnati. Claims use since Feb. 8, 1946, Subj. to intf. with SN 683,027.

Korid—This for corrosion inhibiting metal conditioners. Filed Mar. 14. 1955 by Petrolite Corp., St. Louis. Claims use since Feb. 4, 1955.

Spray Flo—This for detergent composition for cleaning of food processing equipment. Filed June 3, 1955 by Pennsylvania Salt Mfg. Co., Philadelphia. Claims use since Aug. 10, 1954.

Deodall—This for liquid aromatic material used as a multi-purpose masking agent in cleaners, polishes, varnishes, and other products. Filed Oct. 6, 1954 by Sindar Corp., New York. Claims use since Sept. 30, 1953

Select-O-Spray—This for insecticides, moth proofing compositions, deodorants. Filed Nov. 12, 1954 by Bostwick Laboratories, Inc., Bridgeport, Conn. Claims use since Oct. 1948.



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News

Cowles Names Robinson

Matthew D. Robinson has been named technical representative in northern New Jersey for Cowles



Matthew D. Robinson

Chemical Co., Cleveland, Ohio, it was announced late last month by W. J. Schleicher, manager of Cowles' laundry department. Mr. Robinson managed a laundry in Fair Lawn, N. J., prior to joining Cowles. He will continue to make his headquarters in Fair Lawn.

Evans Economics V. P.

Election of Paul R. Evans as vice president in charge of sales for the consumer products division was announced late in December by Economics Laboratory, Inc., St. Paul, Minn. Having joined Economics Laboratory as a salesman in 1936, Mr. Evans became sales manager in 1945 and general sales manager in 1951.

North Coast in New Plant

North Coast Chemical & Soap Co., Seattle, moved last month into its new 250,000 dollar home which replaces the buildings destroyed by fire in August 1954. Founded as a soap manufacturing firm in 1920, the company's line now includes waxes, floor treating materials, industrial and special cleaners. In addition North Coast

distributes industrial vacuum cleaners, floor machines, and rug cleaning supplies. The new building is on the original site occupying two blocks. During the construction period the firm operated in temporary quarters.

Bon Ami Names Huse

William N. Huse has been named assistant to Lester G. Clark, newly elected president of Bon Ami Co., New York, it was announced earlier this month by Nathan Cummings, chairman of the board. Mr. Huse formerly was a vice-president of Dancer-Fitzgerald-Sample, Inc., New York advertising agency. Prior to that, he had been a brand manager for Procter & Gamble Co., Cincinnati.

Concord Buys Standard

Concord Chemical Co., Moorestown, N. J., will acquire the plant and major assets of Standard Soap Co., Camden, N. J., on Jan. 30 and will move its plant and offices on that date to the Camden location, it recently was announced by John J. Cram, president of Concord. The firm continues to manufacture and distribute its line of soaps, cleaning compounds and disinfectants under the same management.

Norma Craig in Tussy Post

Tussy Cosmetiques, New York, recently announced the appointment of Norma Craig as publicity director. Miss Craig succeeds Ruth Ann Bolway who resigned after her recent marriage. Before joining Tussy, Miss Craig was associate beauty and grooming editor of Woman's Home Companion for three and a half years. Other positions she has held include: assistant fashion advertising manager for the Montgomery Ward retail stores; West Coast fashion editor for Parents' Magazine; and assistant publicity director of Shulton.

Heads Colgate Advertising

Appointment of Stuart Sherman as director of advertising for Colgate-Palmolive Co., Jersey City,



Stuart Sherman

N.J., was announced last month by William L. Sims, II, president. Mr. Sherman succeeds Rolland W. Taylor who has resigned to rejoin Foote, Cone & Belding, New York advertising agency, as executive vice-president.

Mr. Sherman joined Colgate as a salesman after graduating from Williams College, later became district manager and then a divisional manager of the company. In 1934, he joined Lord & Thomas advertising agency as vice-president and member of the executive committee. He founded and became president of the advertising firm of Sherman & Marquette, Inc., New York, in 1937. A director of Colgate and a member of its executive committee since 1948, Mr. Sherman has now left Sherman & Marquette and rejoined Colgate to take up his new appointment, effective January 1.

New Stepan Amides

Stepan Chemical Co., Chicago, recently introduced three new surfactant diethanolamides that are said to have a minimum amide content of 90 percent. "P-616" is a



liquid detergent

RAW MATERIALS

Among the many synthetic liquid detergent raw materials offered by the Stepan Chemical Company, you are certain to find just the right characteristics for your use and price requirements. Our laboratory would, of course, be pleased to work with you on any particular problems you might have.

Many formulators find that the completeness of

the Stepan line of liquid detergent raw materials makes it readily possible to achieve substantial economies by ordering mixed truckloads or carloads effecting the lower carload price on all of the individual items.

A few of the products of particular interest in the Stepan line of liquid detergent raw materials are given below.



A specially processed, desalted, sodium alkyl aryl sulfonate. It is a high active slurry in an alcoholic solution and is an excellent and economical foaming, wetting and dispersing agent. In addition to its use in liquid dishwashing detergents, it is also an effective detergent for cotton, wool and synthetic fibers.

LDA

A 100% active, fatty acid alkylolamide and nonionic in character. It provides superior foam stability, detergency, and gives good sudsing quality in the presence of grease. LDA is also noted for being a splendid thickening agent, and an auxiliary emulsifier helping to counteract the defatting action of alkyl aryl sulfonates.

B-153

An ethoxylated nonyl phenol sulfate, 60% active. It is a clear amber liquid with a mild, pleasant alcohol odor. B-153 gives a high and closely knit flash foam to liquid dishwashing detergents. It is also a good auxiliary detergent and is relatively mild to the skin.

NP-10

A 100% active ethoxylated nonionic. It imparts excellent grease emulsification to liquid dishwashing detergents and makes possible better drainage, helping to eliminate film. Among its other advantages NP-10 can aid in lowering the cloud point of a liquid detergent formulation.

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condensate of diethanolamine and a 94 percent minimum methyl laurate. "P-621" is a condensate of diethanolamine and a combination of methyl laurate and myristate. "P-650" is a condensate of diethanolamine and whole coconut methyl esters.

350 at Givaudan Party

The annual fall reception and cocktail party of Givaudan-Delawanna, Inc., New York, was attended by more than 350 members of the soap and detergent, aerosol perfume, cosmetics, and allied industries. The event was held at the University Club in New York City.

P & G Plant Expansion

Procter & Gamble Co., Cincinnati, recently announced plans to add more than 175,000 square feet of floor space to its manufacturing, administration and research building in surburban Cincinnati. The expansion program will more than double the building's present size and is the third major construction activity undertaken by the firm since 1954.

Eugene F. May Dies

Eugene F. May, 42, owner of North Coast Chemical Co., Seattle, Wash., was killed Dec. 18 when his auto overturned near Ririe, Idaho. Mr. May joined the firm in 1950 as a partner, but at the time of his death was sole owner of the company.

Hooker-Niagara Merge

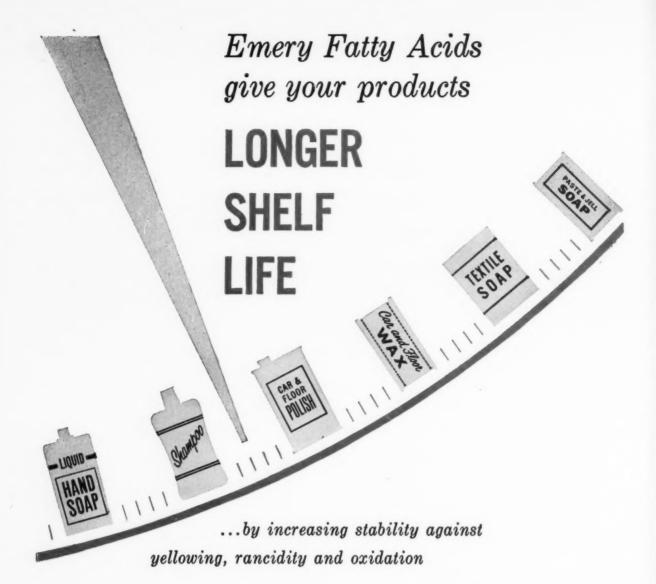
Consolidation of Niagara Alkali Co., Niagara Falls, N. Y., into Hooker Electrochemical Co., also of Niagara Falls, has been authorized by the approval of a vast majority of the stockholders of both companies, it was announced recently. The board of directors of the consolidated company consists of 11 Hooker directors plus one representative from Niagara's board, namely J. C. Cassidy, former Niagara president. Mr. Cassidy also becomes a vice-president of Hooker, it was announced by R. Lindley Murray.



Photos taken at recent annual reception of Givaudan-Delawanna, Inc., New York. Top: K. Merkel, formerly of Colgate-Palmolive Co., Jersey City, N. J.; Robert E. Horsey, vice-president in charge of sales for Givaudan, and William Eagen, Colgate, Center: general view of the gathering. Bottom: Dr. Edwart Masters and C. Kozeski, both of Helena Rubinstein, East Hills, N. Y., and L. L. Lowden of Givaudan-Delawanna, Inc., New York.

chairman of the board, Niagara's facilities will be operated as Niagara Alkali Division of Hooker. Its \$12,000,000 assets raises the total assets of the parent company to

more than \$100,000,000. The division's principal product line is caustic potash and potassium carbonate, which means further diversification for Hooker.



The over-all high quality of Emery's complete line of fatty acids is reflected in end-products made from them. This means that your products will have a greater sales appeal, brought on by lighter color and better odor. Furthermore, they will keep this sales appeal longer because of a high resistance to rancidity, yellowing and oxidation.

Emery has a complete selection of high-quality fatty acids for every need. These consist of:

Emersol Elaines, eight different grades including saponified, single distilled, double distilled, Emersol 233 (low-linoleic) and a completely vegetable origin oleic acid, Emersol 240.

Emery Distilled Fatty Acids, including animal, cottonseed, soya, corn, palm, coconut and special vegetable liquid fractions.

Emersol Stearics and Palmitic, 5 grades including single, double and triple-pressed types, high palmitic and high stearic.

Hyfac Hydrogenated, including hydrogenated tallow fatty acids and glycerides, fish and castor acids and glycerides.

Since Emery fatty acids cost no more than competitive grades, why not take advantage of high-quality by buying all your requirements from Emery!

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SOCMA Elects Hooker

R. Wolcott Hooker, vicepresident of Hooker Electrochemical Co., Niagara Falls, N. Y., was



R. Wolcott Hooker

elected president of the Synthetic Organic Chemical Manufacturers Association at the 34th annual meeting held at the Hotel Statler, New York, Dec. 1. He succeeds Dr. Samuel Lenher, vice-president of E. I. du Pont de Nemours & Co., Wilmington, Del.

John H. Hilldring, president of General Aniline and Film Corp., New York, was elected first vice-president to succeed Mr. Hooker. Frederick Dehls, executive vice-president of Benzol Products Co., Newark, N. J., was named second vice-president and J. Robert Fisher, president of Gamma Chemical Corp., New York, was re-elected treasurer.

Elected to the association's board of governors were Neil B. Conley of American Cyanamid Co., New York, and James A. Singmaster, manager of the New York office of Monsanto Chemical Co., St. Louis. Dr. Elvin H. Killheffer and Dr. August Merz, past presidents of SOCMA, were re-elected honorary members of the board for one year terms.

The new president of SOCMA was born in Chicago, and is a graduate of The Hill School and Cornell University, where he received a bachelor of arts degree in economics. During 1954 he attended the Advanced Management Program at Harvard University. Mr. Hooker entered the chemical field as a salesman for Hooker Electrochemical Co., in 1922. He became sales manager in 1935 and a director of the company in 1937. He was named vice-president in charge of sales in 1941 and in 1953 was appointed vice-president, responsible for purchasing policies and public relations. Mr. Hooker has been a member of the board of governors of SOCMA since 1950, and in 1955 was elected first vicepresident of the association.

Fritzsche Sales Meeting

Fritzsche Brothers, New York, held their annual sales conference in New York the week of Dec. 5. At the meeting, which was addressed by Frederick H. Leonhardt, chairman of the board, John H. Montgomery, president, announced four executive appointments: R. W. Montgomery, sales manager: Robert Krone, manager of the flavor division; W. R. Godfrey, manager of the perfume division; and E. A. Lawson, manager of the industrial odorant division. At the same time Mr. Montgomery announced the adoption of a more comprehensive medical insurance plan for all Fritzsche employees.

The sales meeting was concluded with a dinner dance at the Sherry-Netherlands Hotel, New York, Dec. 9. In addition to Mr. and Mrs. Leonhardt, nearly 150 Fritzsche executives, employees and their wives attended.

Photo taken during dinner dance following annual Fritzsche sales meeting.

GAF Advances Hensel

The board of directors of General Aniline & Film Corp., New York, recently elected Walter



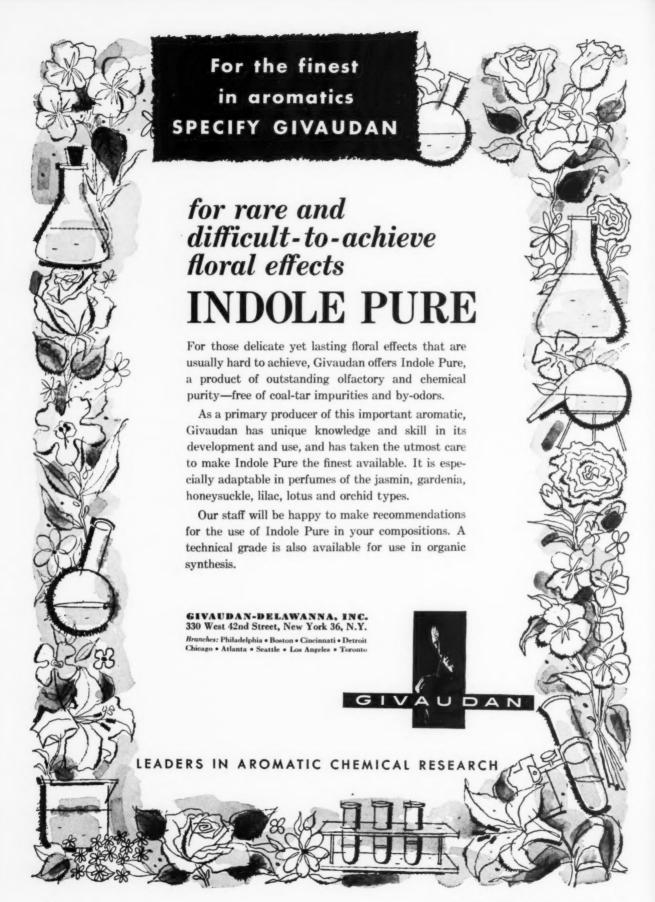
Walter A. Hensel

A. Hensel as vice-president. He will continue as general manager of the firm's Ozalid Division in Johnson City, N.Y. Mr. Hensel first joined General Aniline in 1946 as a finance executive in the Ansco Division. Prior to that, he had served as controller of the firm.

CIBS Elects Officers

The following officers were elected by the Cosmetic Industry Buyers and Suppliers Association (CIBS) at the annual meeting in Toots Shor's Restaurant, New York, Dec. 29: president, David J. Warner, Fleuroma, Inc.; first vice-president, George Kaempkes, Pacquin, Inc.; second vice-president, William Jaeger, Park & Tilford; recording secretary, J. P. Jordan, Crown Cork & Seal Co.; corresponding secretary, J. William Voit, George Lueders & Co.; treasurer, James E. Beyer, Lehn & Fink Products Corp. Elected to the board of directors were Edgar Ellis of Charabot, Inc., and Robert Ring of Hewitt Soap Co.





van Ameringen Elects

The election of Arnold L. van Ameringen, formerly president, as chairman of the board of direc-



A. L. van Ameringen

tors, and Charles P. Walker, Jr., as president of van Ameringen-Haebler, Inc., New York, was announced Dec. 8, following a meeting of the board.

Mr. Walker became an officer and director of van Ameringen-Haebler, Inc., in February, 1953, and has been serving as executive vice-president. Previously he had been general sales manager and a member of the board of directors of Chas. Pfizer & Co., Brooklyn.

Mr. van Ameringen will continue to devote his full time to the interests of the company and stated that Mr. Walker's promotion is in line with the firm's policy of continuously strengthening the organization which has increased its

Charles P. Walker



sales volume over 50 percent during the last three years.

van Ameringen - Haebler, Inc., was founded in 1909 and is a supplier of raw materials to the soap, perfume, cosmetic and food industries. It operates two chemical plants in New Jersey as well as a subsidiary in Paris, France.

Heads W-H-C Sales

Welch, Holme & Clark Co., New York, has appointed Irving J. Groeschel as sales manager, it was announced recently by L. S. Hirsch, president. Mr. Groeschel has been associated with Welch, Holme & Clark since 1934.

Solvay in 75th Year

Solvay Process Division of Allied Chemical & Dye Corp., New York, entered its 75th year of chemical manufacturing with completion of construction of its hydrogen peroxide plant in Syracuse, N. Y., and with work progressing on its chlorine-caustic soda unit at Brunswick, Ga. The hydrogen peroxide plant is located close to the site where Solvay, founded in 1881, built America's first soda ash plant. Prior to that all American requirements of this basic chemical had to be imported from abroad.

Later caustic soda facilities were added. Solvay built the first byproduct coke-ovens in the United States to produce chemical grade benzol and toluol: later chlorine and phenol were added to the line of Solvay products. Syracuse also was the site of America's first synthetic ammonia plant. A second soda ash plant was constructed at Detroit in the 1890's and a third at Baton Rouge, La., in 1935, where chlorine facilities were added later. In 1955 a new soda ash plant and other facilities for production of chlorine, potassium carbonate, sodium sesquicarbonate, etc., were completed in Syracuse. A chlorine caustic soda plant was built in Moundsville, W. Va., in 1953. A year later a plant for the production of chlorinated methane compounds, including carbon tetrachloride, methylene chloride, etc., was completed there.

Munchmeyer to Wyandotte

Louis W. Munchmeyer has been appointed as assistant general manager of the Michigan Alkali



Louis W. Munchmeyer

Division of Wyandotte Chemicals Corp., Wyandotte, Mich., it was announced recently by Bert Cremers, vice-president and general manager of the division. Mr. Muchmeyer comes to Wyandotte from the Ansco Division of General Aniline and Film Corp., Binghampton, N. Y. Prior to that he was a vice-president of Michigan Chemical Corp., St. Louis, Mich.

Williams Marks 40th Year

Victor E. Williams, eastern regional vice-president of Monsanto Chemical Co., St. Louis, completed 40 years of service with the firm on Dec. 13. The past 30 years have been spent in the company's New York office where Mr. Wil-

Victor E. Williams



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based on tetra propylene polymer

NANSA* brand

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80% dodecyl benzene sodium sulphonate

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bead type totally spray dried synthetic detergents containing molecularly condensed phosphates, carboxy-methyl-cellulose, silicates, foam builders, etc.

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for shampoos, toilet preparations and liquid cleansers

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INORGANIC DIVISION: phosphoric acid and complex phosphates.





liams is now the ranking eastern representative in Monsanto's organic chemicals division.

Mr. Williams joined Monsanto in St. Louis in 1915 as an office boy. By 1925, he had become office manager of the firm's New York office. He became director of sales for the organic chemicals division in 1943 and regional vice-president in January 1954.

A past president of the Drug and Chemical Club, Mr. Williams is also past president of the Salesmen's Association and former chairman of the Drug, Chemical, and Allied Trade Section of the New York Board of Trade. He is currently on the board of trustees of the College of Pharmacy at Columbia University, New York.

Givaudan Honors Veterans

Six employees of Givaudan-Delawanna, Inc., New York, were presented with gold Swiss watches commemorating their 25th anniversary with the company. The presentation took place during the annual Christmas party of the company at the Swiss Chalet, Rochelle Park, N. J., Dec. 17. The six new 25 year veterans, who brought the company total to 63, are: Joseph Balsam, Louise Lehmann, Edwin P. Nicholson, Ellen Stapleton, William Wisse and Dr. Max Luthy, Givaudan's vice-president in charge



J. T. Toomey, second from left, secretary of Chicago Laundry Owners Assn., and H. Ditkowsky, second from right, president of Hyde Park Laundry & Cleaners of Chicago, look over an award-winning presentation of Colgate-Palmolive Co., during recent convention of American Institute of Laundering in Philadelphia. At left is R. O. (Tex) Trowbridge, manager of Colgate's industrial sales department, and J. N. Gilvey, also with Colgate's industrial sales.

of production and research.

E. R. Durrer, president and R. E. Horsey, vice-president in charge of sales, addressed approximately 400 of the firm's employees who attended the annual gathering, which included a steak dinner.

Laundries Honor Colgate

The American Institute of Laundering, Joliet, Ill., presented Colgate-Palmolive Co., Jersey City, N. J., with its Award of Recognition for "advertising and promoting professional laundry service to the American public through a consumer media." Denys R. Slater, president of A.I.L., presented the award at a recent convention to Colgate's representative, R. O. Trowbridge, manager of industrial sales.

The Colgate campaign involved a number of local contests in supermarkets which offer lucky housewives a year of free professional laundry service, in addition to other prizes of free laundry service. Supermarket displays, newspaper advertisements, window signs, and truck banners were used to promote the contests.

In New Jersey the contest was so successful that the Professional Laundry Foundation sprang up in its wake. The state wide organization has backed a television campaign and decided to make the free laundry service contest an annual affair.

nual affair. Meihuizen Visits U. S.

J. E. Meihuizen, managing director of Polak's Frutal Works, Amersfoort, Holland, recently spent two weeks in the U.S. on a business trip to the firm's main offices in Middletown, N.Y. He returned to Holland via plane on Dec. 18.

Pictured during the presentation of gold Swiss watches, are executives and new 25-year veterans of Givaudan-Delawanna, Inc. From left to right, Dr. Max Luthy, vice-president of production and research; Joseph Balsam, Miss Louise Lehmann, Edwin P. Nicholson, William Wisse, Miss Ellen Stapleton, E. R. Durrer, president and R. E. Horsey, vice-president in charge of sales.



With Hooker after 43 Years

JUST 43 years ago, a young fellow named William J. Weed was looking for work in Niagara



William J. Weed

Falls, N. Y., whence he had come in hopes of catching on as an electrician with one of the power companies. But work was scarce and his brother advised him to try Hooker Electrochemical. Next morning bright and early, he took a Buffalo Avenue street car out to what he believed was the Hooker plant. He asked at the gate house for the employment office, went in and was hired,—hired as a painter of fences.

After working all day, he examined his time card on the way out of the plant and discovered he was not working for Hooker, but for the chemical company across the street, Niagara Alkali. So, what the hell it was only temporary anyway,—so he decided to stay with Niagara. The temporary job lasted 43 years during which time he worked his way up to become director of sales and vice-president, moving to New York in the meantime.

Then, a couple of months ago, Hooker took over Niagara Alkali and after 43 years, Bill Weed was working for Hooker of which he continues as a vice-president. During the same period, J. Clark Cassidy, a young man fresh with an electrical engineering degree from Columbia also rose through

the ranks at Niagara to become its president, now a Hooker vicepresident. Both gentlemen are today reputed to own very large chunks of Hooker stock following the merger.

At a recent Hooker meeting, R. Lindley Murray, board chairman of Hooker, reminded Mr. Weed that he had started working for Hooker 43 years late, but that there were still plenty of fine opportunities with the company.

Cosmetic Chemists Meet

(From Page 55)

group, the possibilities of which have been far from fully explored. Products made from aceto glycerides range from plastic solids to liquids. Glycerides which remain liquid to sub-zero temperatures are alcohol soluble and highly resistant to oxidation can be made by modern methods and are awaiting study and exploitation.

Three new types of silicones were described by C. C. Currie and R. C. Gergle of Dow-Corning Corp., Midland, Mich. The first type is an hydrophobic silicone fluid, exhibiting ultraviolet light absorption in the 200 to 420 millicron range and holding promise as a water repellent sunscreen agent. The second group consists of fatty alcohol esters of dimethylpolysiloxane. These wax-like silicones are soluble in waxes, esters and alcohols. The third series are acid-

Dr. Ernest Guenther, left, receives Society of Cosmetic Chemists' medal award from Kenneth L. Russell, retiring president.



free reaction products of ethylene glycol or polyethylene glycol with dichlorodimethylsilane, which are soluble in many polar solvents.

Other papers presented at the meeting included "The Emerging Cosmetic Chemistry" by P. G. Lauffer, G. W. Luft Co., Long Island City, N.Y.; "Potential Utility of Ion-Exchange Resins in Antiperspirant-Deodorant Formulations" by J. C. Winters, Rohm & Haas Co., Philadelphia; and three papers concerned with dandruff and its treatment.

The society's eighth annual medal award was received at the dinner meeting by Dr. Ernest Guenther, vice president and technical director of Fritzsche Brothers, Inc., New York. A pupil of Paul Karrer, Zurich, Switzerland, Dr. Guenther is the author of a six volume standard work on essential oils and of a great many shorter technical publications. Also honored at the dinner were the society's 12 charter members who founded the group 10 years ago.

At the luncheon, George G. Kolar, Kolar Laboratories, Inc., Chicago, was installed as president of the society. He succeeds Kenneth L. Russell, Colgate-Palmolive Co., Jersey City, N.J. Other officers inducted at the lunch-time ceremony included: Sabbat J. Strianse, Vick Chemical Co., New York., president-elect; Walter A. Taylor, Chesebrough-Pond's, Inc., Clinton, Conn., treasurer: and Robert A. Kramer, Evans Research & Development Corp., New York. Directors for the coming year are Gabriel Barnett, Warner-Hudnut, Inc., New York, and Savery F. Coneybear, Colgate-Palmolive.

Maison G. deNavaree, vicepresident in charge of manufacturing and research for Beauty Counsellors, Inc., Detroit, and one of the founders of the Society, was presented with an honorary membership in the Society of Cosmetic Chemists during the meeting. The scroll conveying the honor was presented to Mr. deNavarre by Dr. Kenneth L. Russell, 1955 president of the Society. Ma

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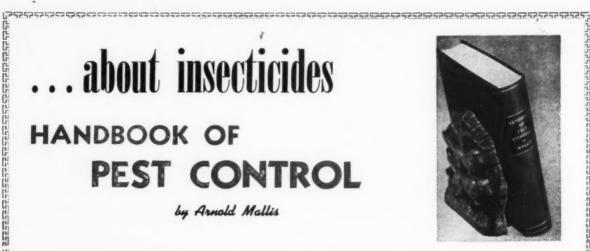
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Newly installed officers of CSMA, left to right: Peter C. Reilly, Reilly Tar & Chemical Corp., Indianapolis, Ind., reelected treasurer; Harry E. Peterson, Peterson Filling and Packaging Co., Danville, Ill., elected first vice-president;

Dr. E. G. Klarmann, Lehn & Fink Products Corp., New York, elected president; James E. Ferris, Niagara Alkali Div., Hooker Electrochemical Co., Niagara Falls, N. Y., elected second vice-president, and H. W. Hamilton, re-elected secy.

C.S.M.A. Meets, Elects Klarmann

HE election of new officers, the presentation of the 1955 Achievement Award, the announcement of the winners of the aerosol package contest and a full program of papers and panel discussions of technical, marketing and application aspects of chemical specialties highlighted the 42nd annual meeting of the Chemical Specialties Manufacturers Association held at the Hotel Roosevelt, New York, Dec. 5, 6 and 7. Attendance at the meeting-probably the largest in the history of the association-was over 900, with approximately 850 registrations.

New officers elected at the meeting include: Dr. E. G. Klarmann, vice-president and manager of technical services of Lehn & Fink Products Corp., New York, president; Harry E. Peterson, Peterson Filling & Packaging Corp., Danville, Ill., first vice-president; James E. Ferris, Niagara Alkali Div., Hooker Electrochemical Co., Niagara Falls, N. Y., second vice-president. Peter C. Reilly, Reilly Tar & Chemical Corp., Indianapolis,

Ind., and H. W. Hamilton were reelected treasurer and secretary, respectively.

Named to three year terms on the association's board of governors were Melvin Fuld of Fuld Brothers, Inc., Baltimore, retiring CSMA president; Frederick G. Lodes, Precision Valve Corp., Yonkers, N. Y., and Ira P. MacNair, publisher of Soap & Chem-

ical Specialties, and president of MacNair-Dorland Co., New York.

For his outstanding contributions to the evaluation of detergents and establishment of industry standards for surface active agents, Jay C. Harris of Monsanto Chemical Co., St. Louis, received the 1955 Achievement Award of the Chemical Specialties Manufacturers Assn. Mr. Harris is director

Melvin Fuld, president of Fuld Brothers, Inc., Baltimore, retiring president of CSMA, congratulates his successor as head of CSMA, Dr. E. G. Klarmann of Lehn & Fink Products Corp., New York, who was previously first vice-president of the association.











Captions, facing page, left to right, top to bottom:

Howard Young, Davies-Young Soap Co., Dayton, Ohio, and John Moore, Mutual Chemical & Supply Co., Columbus, Ohio; Harold Schmidt, A. F. Bohnert and Glenn E. Doerr, Federal Varnish Division, Chicago; Bernard Freudenthal, Chemical Service of Baltimore, Inc., Baltimore, and Robert E. Clark, Semet-Solvay Petrochemical Division, Allied Chemical & Dye Corp., New York.

C. S. Treacy, M. Argueso & Co., Mamaroneck, N. Y.; Henry E. Blanchford, Mac-Lac Co., New York; Dr. Victor G. Fourman, Syntomatic Corp., New York, and Philip H. Harris, Mac-Lac; Don Begley and Vince Hall, Reilly Tar & Chemical Corp., Indianapolis; H. W. Hamilton, secretary CSMA and Mrs. E. D. Sullivan, assistant secretary CSMA; Stan Mattison, Niagara Alkali Div., New York, and R. E. Wood, Durez Plastics Division, Hooker Electrochemicals Co., Niagara Falls, N. Y.

S. J. Was, V. C. A., Inc., Bridgeport, Conn.; R. O'Connor, Joseph F. Simmons and Charles West, Colgate-Palmolive Co., Jersey City, N. J.; James M. Cloney, General Aniline & Film Corp., New York, and Walter Mannheimer, Miranol Chemical Co., Irvington, N. J.; Robert K. Rigger, Wyandotte Chemicals Corp., Wyandotte, Mich., and Peter T. Vitale, Colgate-Palmolive Co., Jersey City. New Jersey.

Thomas Morgan, Soap & Chemical Specialties magazine; Harry E. Peterson, Peterson Filling and Packaging Co., Danville, Ill., and E. J. McKernan, Seaguist Manufacturing Corp., Cary, Ill.; Henry Eickmeyer and B. Wirsing, Schimmel & Co., New York; Mrs. Edith Alt, George R. Freund and Edward Koos, Cornelius Wax Refining Division, G. S. Ziegler & Co., New York.

Dr. Alfred Weed, John Powell & Co., Division of Olin-Mathieson Chemical Corp., Baltimore; Arthur Rasmussen, Furst-McNess Co., Freeport, Ill., George W. Fiero, Esso Standard Oil Co., New York; Dr. M. H. Doner, J. R. Watkins Co., Winona, Minn., George Hartz, John Powell & Co., Division Olin-Mathieson Chemical Corp., New York; Al Saeks, Puro Co., St. Louis and Robert E. Horsey, Givaudan-Delawanna, Inc., New York

of the application research department of the mechandising division of Monsanto in Dayton, O. The announcement of the award and the presentation of the plaque was made at the luncheon Dec. 6. At that time, too, the winners of the 1955 aerosol packaging contest sponsored by CSMA received plaques which are part of the award. Names and photographs of the winners appeared

in the December issue of Soap.

Following the presentation of the Achievement Award to Mr. Harris, John L. Gillis, vice-president of Monsanto, discussed the role of research in the chemical specialties industry. In acknowledging the honor paid to Mr. Harris, Mr. Gillis said: "Many of us in Monsanto have known first hand of Jay's achievements through the

Captions: Top to bottom, left to right:

Christian Wight, van Ameringen-Haebler, Inc., New York, and N. J. Gothard, Sinclair Relining Co., Harvey, Ill.; H. W. Moburg, Rex Research Corp., Toledo; H. W. Morrow, Canada Rex Spray Co., Brighton, Ont., Canada, and Dr. O. F. Hedenburg, Rex.

Frank J. Pollnow, Jr., Vestal, Inc., St. Louis; Merrill J. Gross and Robert F. Murphy, Fries & Fries, Inc., Cincinnati.

John Pickup, S. B. Penick & Co., New York; Dr. H. E. Moorman, Dr. LeGear Medicine Co., St. Louis and Frank Seeland, Penick.

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E. Vles and E. Sturman, Polak's Frutal Works, Inc., Middletown, N. Y.; Dr. Frank O. Hazard, Wilmington College, Wilmington, Ohio, and Dan Kent, B. F. Goodrich Chemical Co., Cleveland, Ohio.











years, and we were delighted to learn that you have chosen him to receive your 1955 Achievement Award. I am gratified to have this opportunity to share with you in this fine salutation to his efforts."

Captions, top to bottom, left to right: Walter Evans, S. F. Lawrason & Co., London, Canada; Ralph Hamilton and Gordon Baird, Baird & McGuire, Inc., Holbrook, Mass.; Don King, Masury-Young Co., Boston; F. H. Kretschmer, Midland Laboratories, Dubuque, Iowa, and Gerard De Napoli, Masury-Young.

Harry J. Sander, Simoniz Co., Chicago; L. M. Argueso, Sr., M. Argueso & Co., Mamaroneck, N. Y.; Joseph Green and Joseph Minelli, Oil Specialties & Refining Co., Brooklyn; William Janney, National Can Co., New York; Fred Koch, Dow Chemical Co., New York; J. L. Brenn, Huntington Laboratories, Inc., Huntington, Ind., and Joseph B. Magnus, Magnus, Mabee & Reynard, Inc., New York.

John Powell, Modern Sanitation magazine, Joseph Battley, National Paint, Varnish & Laquer Association, Washington, D. C., and James D. MacNair, Soap & Chemical Specialties magazine, New York; Tom Reilly, General Electric Co., Waterford, N. Y.; Irving Gaines, Onyx Oil & Chemical Co., Jersey City, N. J., and George W. Lowry, Curley Co., Philadelphia.

Elliott L. Weinberg, Metal & Thermit Corp., New York; Harold G. Lederer, R. M. Hollingshead Corp., Camden, N. J.; James A. Nelson, Pest Control magazine; Jack Hoerner, Armour & Co., Chicago; George F. Sharrad, Hollingshead; Norman Jay and Theodore Heilig, Regal Chemical Corp., Brocklyn; Robert J. Thompson and William A. Bours, III, Kinetic Chemicals Division, E. I. du Pont de Nemours & Co., Wilmington, Delaware.

H. W. Hamilton, secretary CSMA, Sharon Ritchie, Denver, "Miss America of 1956;" Edmund D. Bennett, Fluid Chemical Co., Newark, N. J.; Mrs. Samuel Iserman, Van Dyk Chemical Co., Belleville, N. J.; Alfred H. Moeller, Noville Essential Oil Co., North Bergen, N. J.; and J. R. Ruston, S. C. Johnson & Son, Inc., Racine, Wis.

Automotive Division

A "plastic repair" technique for restoration of damaged body components on new and used automobiles and trucks was described in the paper "Bottled Body Repairs —Easy, Economical and Enduring", by J. G. Coffin of the Chevrolet Motor Division of General Motors Corp., Detroit. In Mr. Coffin's paper, presented during the meeting of the Automotive Division, the morning of Dec. 6, he described the new repair method.

"Basically, this new repair method consists of laminating a patch consisting of pieces of woven fiber glass cloth over the prepared patch area and saturating the cloth with liquid epoxice type synthetic resin. The resin cures (hardens) into a solid, infusible state and the patch is ground and sanded to match the con-

tour of the parent panel or panels. The area finally is painted with lacquer or enamel in the conventional manner."

"The plastic repair technique is supplanting to a large degree 'conventional' methods for replacing corroded sections of body outer panels and structural members. Formerly, damage in this category was remedied by removing the rusted material, welding in a replacement section, leading over the welded joints and metal finishing. These operations are time consuming and require a considerable degree of operator skill.

"In contrast, the fiber glass reinforced epoxy repair can be made by an operator having little or no experience who follows the very simple instructions."

Specifications, why they are needed, what they are intended to do and a definition of their principal parts were discussed in a paper, "Government and Military Specifications" by Halkey K. Ross, Chief, Automotive Chemicals & Packaging Branch, Paint & Chemical Laboratory, Aberdeen Proving Grounds, Md.

Captions, left to right, top to bottom:

William Schulman, Chemical Service of Baltimore, Inc., Baltimore; Kurt Wasserman, Elizabeth Maguire and I. Y. Straus, Dura Commodities Corp., New York; Earl Brenn, Huntington Laboratories, Inc., Huntington, Ind.; Bayard S. Johnson, Franklin Research Co., Philadelphia and Herbert J. Mellan, Durez Plastics Division, Hooker Electrochemical Co., North Tonawanda, N. Y.

Rud. Saacke, G. Barr & Co., Chicago; Thomas D. Johnson, Jr., Kinetic Chemicals Division, E. I. du Pont de Nemours & Co., Wilmington, Del., and George Barr, G. Barr; George W. Fiero, Esso Standard Oil Co., New York; Frank Nelson, Esso, and John Conner, CSMA counsel, Washington, D. C.

Martin Peters, Moore Brothers Co., New York; George J. Flanagan, Federal Varnish Div., Chicago, and Y. C. Fernandez, Odorite Chemical Industries, Inc., Tampa, Fla.; W. W. Lewers, Brooklyn consultant; Joseph E. Sternberg, Mantrose Corp., Brooklyn, and Raymond Barnett, J. W. Wilson Glass Co., Brooklyn.

Hamilton A. Laudani, U. S. Department of Agriculture, Savannah, Ga.; Mrs. Laura G. Arrington, U. S. Department of Commerce, Washington, D. C., and Ely M. Swisher, Rohm & Haas Co., Philadelphia; Henry Brownstein, Hysan Products Co., Chicago, and William Block, Blockson Chemical Co., Division Olin-Mathieson Chemical Corp., Joliet, Illinois.

W. C. Wallstein, West Disinfecting Co., Long Island City, N. Y.; Paul D. Torpin, McLaughlin Gormley King Co., Minneapolis; Abraham Weiner, Standard Naphthalene Products Co., S. Kearny, N. J.; A. W. Bevernick, Prentiss Drug & Chemical Co., Chicago, and William J. Zick, B. Heller & Co., Chicago.

In reviewing "Products for Maintenance of Automotive Finishes", a paper by Fred C. Kraatz, technical service manager of S. C. Johnson & Son, Inc., Racine, Wis., it was pointed out that "regardless of what products are used there are still two fundamental steps involved in the ideal maintenance of automotive finishes: 1.) cleaning and 2.) waxing."

"Whether the cleaning and waxing are done in one operation with a single product or whether it involves the use of a cleaner first and a product to add the protective film later, the

operation is basically the same, and a method which does not involve cleaning is not a good one," the speaker said.

"In summary, while great strides have been made in automotive finishes, they still require cleaning and waxing. The polish manufacturers have developed new cleaners, polishes and waxes to fill every consumer need and continue to explore new approaches. Basic research to uncover new ingredients and to study physical phenomena holds promise for the future. Increased demands are being placed on cleaners and waxes. Industrial fumes are more of a problem today than formerly, and changing trends in colors pose new challenges. Tomorrow may bring forth a completely new array of cleaners and waxes to satisfy the ever present need









Captions, top to bottom, left to right:

Presentation of plaques to winners in CSMA sponsored aerosol package contest. Frederick G. Lodes of Precision Valve Corp., Yonkers, N. Y., chairman of the contest, presents plaque to grand award winner Joseph Cain, manager of the Brooklyn store of Sears, Roebuck & Co., Chicago.

Winners with plaques, first row: Walter H. Fischer, Walgreen Drug Stores, Chicago; John Matthews, Afrosol Co., Neodesha, Kans.; Sigmund Edelstone, Dupli-Color Products Co., Chicago; second row, Joseph Cain, Sears, Roebuck; Robert R. Deutsch, Sears, Roebuck merchandising counsel; E. Martin, Elizabeth Arden Sales Corp., New York; William Troy, Colgate-Palmolive Co., Jersey City, N. J. Third row, Maxwell Schultz, Marlowe Chemical Co., New York; Arthur Kreinik, Dana Perfumes, Inc., Chicago; Lyle Powell, Jewell Tea Co., Barrington, Ill., and William Anderson, E. F. Houghton Co., Philadelphia.

Messrs. Deutsch and Cain hold plaques for winners in class and best of show for "Cross Country Rose and Floral Spray" of Sears, Roebuck & Co.

for a means of keeping cars bright and beautiful."

Insecticide Division

T HE "Eradication of Scabies in Sheep and Cattle" was discussed in a paper during the morning session of the Insecticide Division, Dec. 6. The paper, by James L. Hourrigan, Chief, Special Diseases Eradication Section, Animal Disease Eradication Branch, U. S. Department of Agriculture, Washington, D. C., told of the current eradication program and described methods of treating infested animals and the insecticides commonly used for the purpose. The speaker also covered the nature and

Mr. Lodes and Mr. Cain hold grand award winner of the 1955 aerosol package contest.



SOAP and CHEMICAL SPECIALTIES

symptoms of scabies in sheep and cattle, the means of spread and its economic importance.

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Much more needs to be done in the control of livestock insects, A. W. Lindquist of the Entomology Research Branch, Agricultural Research Branch of U.S.D.A. stated in his paper, "Insects as Livestock Pests". He pointed out that a great deal of work has already been done in protecting livestock, and that much more must be done before controls are fully effective. The Federal Government spends eight to 10 times as much money in control of plant pests as it devotes to livestock pests. This in spite of the fact that plants values run 12 to 14 billion dollars a year, as against 18 to 20 billion dollars for livestock values.

In addition, the speaker stated, 10 times as many research men are devoting their study to plant pests as are working on livestock pest control. There are probably fewer than 30 men working on huge livestock industry pest problems, he estimated.

The "U.S.D.A. research program is dedicated to fulfilling the needs of the livestock industry, especially better protection of animals against biting flies and...more



Jay C. Harris, director, application research department, merchandising division, Monsanto Chemical Co., Dayton, Ohio, second from left, holds plaque for 1955 Achievement Award of CSMA. With Mr. Harris, left to right are: Dr. E. G. Klarmann of Lehn & Fink Products Corp., New York, newly elected president of CSMA, Melvin Fuld of Fuld Brothers, Inc., Baltimore, retiring president, and John L. Gillis, vice-president of Monsanto Chemical Co., St. Louis, who spoke following the presentation of the award to Mr. Harris.

effective insecticides and methods for controlling other livestock pests."

"Current Status of Pyrethrum Supplies", a paper by Russell B. Stoddard of Fairfield Chemical Division, Food Machinery & Chemical Corp., New York, was read in Mr. Stoddard's absence by John Rodda of FMC. The paper is published beginning on page 124.

Disinfectant, Sanitizers

THE Dec. 6 morning session of the Disinfectant and Sanitizers Division featured a symposium dealing with "Detergent-Sanitizers". Dr. E. G. Klarmann, Lehn & Fink Products Corp., New York, was moderator. The session opened with a paper on "Phenolic Based Detergent-Sanitizers" by Charles R. Scott and Paul A. Wolf, Dow Chemical Co., Midland, Mich., delivered by Charles R. Scott.

Mr. Scott first gave the definition and limitations applicable to sanitizers and disinfectants. He stressed that the phenolics are commonly classed as disinfectants, whereas quaternaries are both detergents and germicidal agents. To provide detergent-sanitizing action phenolics are compounded with detergent materials. Because germicidal action is inhibited by the presence of organic matter, detergency may be considered supplementary to the sanitizing action of the disinfectant. Phenolics readily lend themselves to such formulations because of their wide range of compatibility. Bactericidal action of phenolics is actually boosted by certain soaps, such as coconut, castor, and linseed. Optimum results are yielded by a one/one ratio of soap and germicide, The antimicrobial spectrum of phenolics is broad and may be broadened by incorporation in the product of disinfectants exhibiting supplementary action. This presents little difficulty because of the good compatibility characteristics of phenolics. Low toxicity, low skin irritation, some fungicidal activity and low

(Turn to Page 136)

H. W. Hamilton, CSMA secretary, presents an inscribed Omega wrist watch to Melvin Fuld, president of Fuld Brothers Co., Baltimore, retiring CSMA president.



Pyrethrum Outlook

By Russell B. Stoddard*

Fairfield Chemical Division, Food Machinery & Chemical Corp., New York

The inclusion of an analysis of pyrethrum supplies in a C.S.M.A. convention program is in itself a highly significant development. Nine years ago it would have been regarded as completely ridiculous, and even five years ago would not have been considered important.

To bring the present and future supply position into perspective one must review post-war developments as they have affected pyrethrum. Things happen so rapidly that it is difficult to recall that in 1946 pyrethrum had been completely written off as an obsolete and useless insecticide material by practically everyone concerned with the insecticide industry. Only a few stubborn individuals here and there retained a degree of faith in its future importance. Matters were further complicated by the existence of carry-over stocks of close to 5000 tons of flowers in the hands of the London Board of Trade and our own Commodity Credit Corporation. It is not surprising that pyrethrum production looked unattractive and that growers embarked on a program of converting their pyrethrum acreage to other crops.

Progress was slow until 1949 but by 1950 existing surpluses had been consumed and consumption had exceeded production.

During the past four years consumption in the U. S. has fluctuated within narrow limits. The most significant factor has been the steady and accelerating increase

in consumption outside the U. S. which was negligible in the prewar days and non-existent in 1946. In the meantime production has caught up to a point where for the last two years there has been a reasonable balance between supply and demand.

Pyrethrum alone, on the basis of its well-known intrinsic merits of safety, rapidity of action and broad range of effectiveness, undoubtedly would have recovered in some degree. However, the rapidity with which pyrethrum has regained a major place in the insecticide field is to a great extent due to the development and production in early 1946 of a highly effective synergist, piperonyl butoxide. This completely altered the economic picture since it made available combinations of pyrethrum and piperonyl butoxide equally as safe as pyrethrum alone, with even greater effectiveness and broader range of usefulness and at substantially lower costs. Not only has this influenced U. S. practices but it is the major factor involved in the rapidly increasing use elsewhere. Other synergists now available play a more limited part.

What we are concerned with today in any discussion of pyrethrum supplies is not straight pyrethrum insecticides of the type in general use prior to the war. Pyrethrum today is a vitally valuable ingredient in insecticide compositions. Its usage depends on increasing recognition of the unique advantages of what may be called pyrethrum-type insecticides which

include pyrethrum plus a synergist and for many purposes, other ingredients such as allethrin which can be used as a substitute for pyrethrum in certain types of compositions. Since one can confidently predict that world usage, including the U. S., of pyrethrum-type insecticides will increase steadily and possibly rapidly over the next few years, the question of present and future pyrethrum supplies becomes vitally important.

Because of the varying pyrethria content of flowers, extracts, and concentrates, the only simple statistical presentation of the supply and consumption situation is in terms of pyrethrins. The U.S. consumption of pyrethrins during 1955 will be not less than 80,000 pounds and certainly not more than 100,000 pounds. Perhaps the most accurate estimate would place it between 85 and 95,000 pounds. Consumption outside the U.S. is even more difficult to estimate, but certainly it will be in the neighborhood of 50,000 pounds. Availability has been fully adequate to meet these demands.

Consumption in 1956 will be at a higher level. In addition to statistically predictable increases, the impact of the Miller Bill and the increasing emphasis on safe control of insects affecting man, animals and foods, will result in mounting usage of pyrethrum-type insecticides. The projection of trends into figures and percentages will remain in the crystal ball category until the electronic brains can take over. Any prediction that

^{*}Paper presented before the 42nd annual meeting Chemical Specialties Manufacturers Assn., New York, Dec. 6, 1955.

U. S. consumption of pyrethrum will expand by at least 20 percent in 1956 is not unrealistic.

Outside the U.S. other influences come into play. They include increasing recognition of the merits of pyrethrum-type insecticides, increasing difficulties in control of resistant insects, particularly flies and mosquitoes, and, most important of all, higher standards of living. It is a certainty that the rate of increase in pyrethrum consumption outside the U.S. will expand at a more rapid rate, although no one can predict the exact moment at which the U.S. will lose its traditional place as a major consumer of pyrethrum.

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For pyrethrum supplies we still have to look almost entirely to Africa and the Belgian Congo. Brazilian production, which was substantial in 1944, dropped to practially zero and never recovered. Japanese production reached a high of over 2000 tons of flowers in 1953 but has fallen off to a point where it is no longer adequate for the requirements of the domestic industry. Japan is not and will not be in the foreseeable future an exporter of pyrethrum. Ecuadorean production, which has been somewhat over-publicized, is a reality but only on a small-scale. Tonnage available from that source during the next few years will be minor, although the long-range potentials are different. However, 1956 and 1957 insecticides cannot be manufactured out of 1960 potentials. African production fortunately is increasing and will continue to increase. The visible supply of pyrethrum for 1956 is adequate to support a reasonably predictable growth in consumption both here and abroad.

If consumption continues to rise into 1957, as it almost certainly will, supplies will still be available to cope with it. Beyond that only a major and rapid increase in world production will be adequate to keep step with a continuously rising demand curve. Long-range predictions come down largely to a matter of personal opinion. My opinion is that pyrethrum supplies can and will be expanded to meet any reasonably predictable increase in demand.

The danger in the situation. if any, lies in the possibility for sudden and explosively rapid increase in demand, not necessarily arising in the U.S. Even this does not constitute a serious danger. Allethrin is available, although it has by no means lived up to its early and premature publicity. Usage up to the present has been limited by its shortcomings which include limited range of usefulness against insects and in particular its limited synergistic behavior which up to now has made it impossible to find a truly satisfactory and effective synergist. The fact remains that in the event of a demand for pyrethrum-type insecticides which exceeds the pyrethrum supply, Allethrin could and would serve to keep matters in balance and prevent shortages or runaway markets.

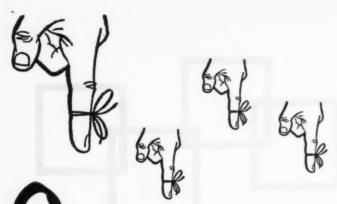
The important matter of price has been purposely passed over until now. The relatively close balance between supplies and demand will undoubtedly stabilize market prices-in fact, modest upward adjustments in quotations for the more dilute forms of pyrethrum extract may be anticipated. Price decreases are not to be foreseen for the simple reason that any important reductions in price would not only discourage increased production but would actually reduce it by throwing the marginal growers out of the picture. In the case of synthetic chemicals, increases in demand usually go hand-in-hand with decreases in cost because of manufacturing economies. In the case of natural products the reverse is true and increasing production requires at least maintenance of price. The best that can be hoped for pyrethrum over a five-year period is a gradual and not too significant decline in costs.

U. S. manufacturers of pyrethrum - type insecticides can make their plans for 1956 with the assurance that

- There is no danger of a major price advance and no possibility of an appreciable decline.
- Available supplies are adequate to support a substantial increase in demand without danger of shortages.
- Even in the event that demand should skyrocket beyond predictable estimates, the situation will not be critical or dangerous.

The National Sanitary Supply Association recently conducted a survey concerning the availability of non-marking rubber soles and heels for ordinary shoes. General use of such material would eliminate extra floor maintenance work to remove black marks and rubber burns. NSSA reports a positive response from manufacturers and associations: non-marking rubber has been in use for some time on workmen's safety shoes and is finding increasing use on ordinary dress shoes.

Available supplies adequate to support substantial increase in demand without danger of shortage. Prices not expected to fluctuate materially higher or lower.



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Floor Polish Formulation

By Kurt J. Wasserman,*

Dura Commodities, Inc., New York

F LOOR surfaces have been protected and maintained with wax for centuries. Parquet floors in France were kept lustrous with wax in the year 1500.(1) It is said that servants bound their feet in cloth and skated up and down the floors to bring up the desired lustre. The method of buffing has changed radically, but throughout the years buffing type waxes were used. Only about two decades ago self-polishing carnauba emulsions were first offered as protective coatings. Since that time, and particularly in the last decade, wax emulsion technology and floor finishes have progressed rapidly. Today, "drybright" finishes are economically of far greater importance than solvent-based or buffing type wax products.(2) Because of this shift we will discuss self-polishing formulations and wax emulsions to the exclusion of solvent systems.

The product development chemist today has a greater and more diversified group of raw materials to choose from than ever before. Time-honored raw materials have been supplemented, or in many cases, replaced by new raw materials.

The basic components of a self-polishing wax are: a. self-polishing base plus emulsifier system; b. leveling additive; c. auxiliary additives. The component parts will now be considered individually.

Base - Emulsifier System

ARNAUBA wax was, and in some cases, still is, the primary wax in the base. Addition of straight or oxidized microcrystalline waxes and wax soluble and compatible resins has become common practice. The local wax supplier in many cases preblends the soluble resin with either carnauba wax or the oxidized microcrystalline wax, in the proportion which the customer desires. Wax compatible synthetic resin extenders have been covered in detail in a recent article by Kroner.(3)

Other waxes, of course, can be used in the base, with good results. A recent addition to the natural waxes, is that of sugar cane wax. Some of the former I. G. emulsifiable waxes are again available in the American market for possible use in the wax base. Other recently introduced types of products are the co-oxidized microcrystalline-polyethylene blends.

Among the new raw materials available for use in the base, two types seem to hold outstanding promise. They are the hard emulsifiable Fischer-Tropsch waxes, (4) and the emulsifiable low molecular weight polyethylenes. The emulsifiable Duroxon J-324 is an outstanding example of a Fischer-Tropsch wax of great utility in the polish field. It is very hard, has a high melting point, light color and low melt viscosity. A simple basic emulsion incorporating this wax would be as shown in Table I.

This emulsion can be processed by either the wax into water or the water into wax method, with the instantaneous method being preferable for the latter procedure. Almost transparent, the formulation gives a glossy film of outstanding buffability characteristics. It will be noted that a low percentage of emulsifier is required to disperse Duroxon J-324.

The emulsifiable polyethylenes likewise merit consideration in the wax base. They are tough materials with good nonslip properties. A basic emulsion of one grade, AC polyethylene No. 629, is shown in Table II below.

In spite of the fact that the melt is viscous, a high solids con-

Table I. Basic Duroxon J-324 Fischer - Tropsch Wax

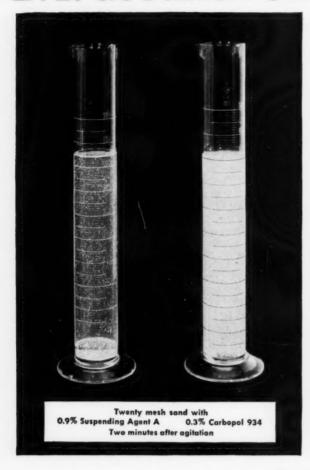
| Duroxon J-324 | 100 | lbs. |
|---------------|-----|------|
| Oleic acid | 10 | lbs. |
| Morpholine | 15 | lbs. |
| Water | 725 | lbs. |
| | 850 | lbs. |

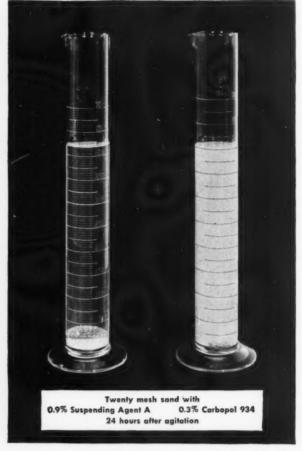
Table II. Basic Polyethylene Emulsion

| AC polyethylene No. 629 | 100 | lbs. |
|-------------------------|-----|------|
| Oleic acid | 20 | lbs. |
| Morpholine | 20 | lbs. |
| Water | 710 | lbs. |
| | 950 | lbe |

*A paper presented at the 42nd annual meeting of the Chemical Specialties Manufacturers Assn., New York, Dec. 6, 1955.

B. F. Goodrich Chemical raw materials





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For experimental samples and technical information, please write Dept. JH-1, B. F. Goodrich Chemical Company, Rose Building, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.

B. F. Goodrich Chemical Company A Division of The B. F. Goodrich Company



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tent of a low viscosity emulsion is readily attainable.

The manufacturer recommends the wax to water method because difficulties may arise if conventional techniques are used.

One can use Duroxon J-324 with the emulsifiable polyethylenes with excellent results. The melt is fluid, emulsifier requirements are low, and it is even possible to process the emulsion by the "instantaneous water to wax" technique. For example:

Table III. Combined Polymer Emulsion

| Duroxon J-324 | 75 lbs. |
|---------------------|-------------|
| AC polyethylene No. | 629 25 lbs. |
| Oleic acid | 10 lbs. |
| Morpholine | 15 lbs. |
| Water | 725 lbs. |
| | 850 lbs. |

It must be remembered that these high melting point wax-like materials require higher processing temperatures than natural and microcrystalline waxes.

The industry owes a good portion of its progress to the advent and use of amine soaps. These highly efficient emulsifier systems have made it possible to disperse many different types of waxes, polymers and resins. The type of emulsifier system used depends normally upon special properties required in the polish film, such as water resistance and removability characteristics. The ratio of emulsifier system to wax base is usually determined by the ingredients incorporated in the wax base, and is accordingly constant for such a base. However, this, too, can be varied, according to the end product desired. For example, if the emulsifier ratio is increased to a certain percentage with some raw materials, an almost transparent dispersion will result. Likewise, if the ratio of emulsifier systems is very low, a turbid dispersion will be the end result. Examples of such emulsions are shown in Table IV. The highly translucent emulsion would be useful in "clear floor finishes" to plasticize the resinous content.

Table IV. "A" (Transparent Emulsion) "B" (Turbid Emulsion)

| | - | I T OUT DIG | Linusion) | | |
|---------------|---|-------------|-----------|--------|------|
| Duroxon J-324 | | 100 | lbs. | 100 | lbs. |
| Oleic acid | | 15 | lbs. | 71/2 | lbs. |
| Morpholine | | 20 | lbs. | 10 | lbs. |
| Water | | 715 | lbs. | 7321/2 | lbs. |
| | | | | 850 | lbs. |
| | | | | | |

In the alkaline portion of the emulsifier system, we have in common use today the alkanolamines. including 2-amino-2-methyl-1-propanol, morpholine, and other amines which have been recommended from time to time. Inorganic alkalis such as borax, ammonia, caustic soda and caustic potash are commonly used supplementary additives. A highly efficient amine which has recently become available is 3-methoxypropylamine. Its volatile characteristics are claimed to be similar to morpholine, and films with 3MPA possess excellent water resistance.(6)

Table V shows that 40 percent less emulsifier was required when using 3MPA, and the emulsion was slightly more translucent than the one with morpholine. Costwise there is a savings of approximately 3ϕ per gallon for the 850 lbs, or 100 gallons of emulsion.

The use of nonionic emulsifiers in conjunction with waxes has been recommended from time to time. Water sensitivity makes their use controversial. However, they offer attractive possibilities of combination with certain raw materials which cannot be easily used with the conventional anionic emulsions, due to incompatibility or stability problems. We shall refer to a speci-

fic example when we cover the subject of auxiliary additives.

Leveling Additives

BEFORE the advent of alkali soluble synthetic resins, natural resins such as shellac and Manila loba gum were exclusively used. As a matter of fact, they still are in common use. Despite the excellent leveling properties of alkali soluble synthetic resins, none seem to possess the toughness of the natural resins. From time to time, other leveling additives have been recommended. These have included casein derivatives, minute additions of surfactants, and others. It has also been suggested that small proportions of ammonia soluble polyvinyl acetates be used in conventional anionic systems in order to increase somewhat the viscosity of the emulsions and help them stay put after application on a floor surface. Certain organic plasticizers have definite leveling effects, but it is cautioned that their use leads to stability and film property problems. The use of alkali soluble synthetic resins and natural resins still prevails to a large extent because of their excellent leveling and gloss producing qualities. The alkali soluble resins and their use have

Table V. Comparison of 3-Methoxypropylamine and Morpholine in Emulsifying Duroxon J-324

| Duroxon J-324 | 100 | lbs. | Duroxon J-324 | 100 | lbs |
|---------------|-----|------|---------------|------|------|
| Oleic acid | 10 | lbs. | Oleic acid | 71/2 | lbs. |
| Morpholine | 15 | lbs. | 3MPA | 71/2 | lbs |
| Water | 725 | lbs. | Water | 735 | lbs |
| | 850 | lbs. | | 850 | lbs |

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recently been described in the literature.(3)

When the usual proportions of a wax emulsion and a resin solution are reversed, we obtain the high resin type of floor finish. In this case the resin, while contributing leveling properties, is not merely an additive. It is the base. These products feature outstanding gloss. excellent slip-resistance and scuffresistance, as well as lack of buffability. The resinous floor finish, at the present time, predominates in sales to the housewife. The resin in common use is shellac, and attempts to find a substitute synthetic alkali soluble resin for it in this type of product have been almost totally unsuccessful. The excess use of alkali soluble synthetic resins in conjunction with shellac would usually tend to give a product which would easily scratch, and worst of all, under certain conditions, would tend to powder badly. Many preparations of this nature, furthermore, are rather difficult to remove completely from the floor, especially after a lapse of time. A very recent trend has been the incorporation of

certain polymer latices in high resin dispersions.

This, then, leads us to the next component part of a floor finish, namely, the auxiliary additives.

Auxiliary Additives

comparatively new, rapidly growing and important trend is the inclusion of polymer dispersions in floor finishes. Their use in protective surface coatings of all types is now widespread and has already revolutionized the paint industry.

At this point, as a suggested guide, it might be appropriate to clarify and classify various types of synthetic resins and polymers which can be used, and are being used in floor finishes.

Addition of polymers to floor wax compositions is said to 1. provide anti-slip properties; 2. reduce cost; 3. improve emulsion color; 4. improve water resistance; 5. reduce tack, and subsequently dirt retention; 6. improve heat and freeze stability; 7. increase hardness of softer waxes; 8. improve gloss; 9. provide film support and

added flexibility: 10, improve wearability of the floor wax; 11, provide ease of removability of the floor finish when required.

As with other additives, dispersions of these polymers must be of a type which will not coagulate the wax or be coagulated themselves when mixed with, for example, the self-polishing base. Many commercially available dispersions meet this requirement. A dispersion should be neutral or negative in charge. The continuous phase is water, and solvents should not be present. Since the latices are colloidal systems, the basic principles governing colloids must be observed in their application.

The pH at which the polymer emulsion is supplied or adjusted is a serious consideration in formulation. Some polymers in aqueous systems are subject to a downward pH drift. A pH drift can easily result in instability of the final product. Polymer dispersions, when blended with wax dispersions, should have approximately the same pH since a wide difference in pH may cause coagulation or "throwing out" of other ingredients. Most latex systems are sensitive to freezing, and it is suggested that only those claimed to be free of freeze-thaw instability be considered. The deficiencies of certain latices for use in floor waxes have been covered in detail in the literature.(8)

Polymers can be used in high-wax, high-resin or in highpolymer formulations. Some latices are sold pre-plasticized while others must be combined with plasticizers before use in floor wax formulations. In some cases it is possible to utilize the basic wax emulsion system to plasticize the polymer dispersion.(8) This is especially true if the polymer is to be used in small quantities and not as the main ingredient of the formulation.

Of interest have been modified polystyrene latices which have been claimed to be designed particularly for the floor wax industry. These ultra fine particle size dispersions possess excellent compati-

Table VI. A Suggested Guide to Synthetic Resins and Polymers for Use in Aqueous Floor Finishes

- 1. Synthetic Resins
 - A. Wax soluble
 - B. Alkali soluble
- 2. Aqueous Polymer Dispersions (Latices)-
 - Includes modified copolymers
 - A. Acrylic
 - B. Polystyrene

 - C. Polyvinyl acetate D. Polyvinyl chloride
- E. Styrene-butadiene
- 3. Alkali Soluble Polymers
 - A. Polyvinyl acetate
 - B. Styrene
- 4. Hydrocarbon Polymers (Wax-like)
- A. Fischer-Tropsch Mineral Wax

 - B. Polyethylene

- e.g. Rhoplex series
 - e.g. Lustrex X-600, X-601, X-620, Ubatol U-2001

e. g. Durez 219, Piccopale 100,85,75

e.g. Shanco L-1001, Amberol 750

- e.g. Darex polymer Y
- e.g. Geon 652 Latex
- e.g. Pliolite Latex 150
- e.g. Vinac ASB-10, Elvalan
- e.g. Lustrex X-810, X-820, X-821
- e.g. FT 200, FT 300
- e.g. AC Polyethylene No. 6, Epolene N.
- 5. Emulsifiable Hydrocarbon Polymers (Wax-like)
 - A. Fischer-Tropsch wax

can, of course, be added to the suggested guide.

- e.g. Duroxon C-60A, J-324,
 - H-110, H-111
- B. Polyethylene e. g. AC Polyethylene No. 629,

729, Epolene E. Promising new synthetic materials, when commercially available

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bility characteristics with most raw material components of a floor polish. The use of one of the polystyrene dispersions has been described by Perry and Sweet.(8)

Alkali soluble polyvinyl acetate films in particular appear to possess superior toughness. They show excellent promise in "high-polymer-low-wax" type of products. Laboratory tests indicate that this type of finish compares favorably with the high shellac type of resinous finish. The following formulation is offered as a basic one to show how this polymer can be successfully incorporated with an emulsifiable Fischer-Tropsch wax, Duroxon H-111, by means of a nonionic emulsifier

Table VII. Polymer Floor Finish—Non-Scuff Type

| A-Duroxon | H-111 | Nonionic | Em | ulsion |
|-----------|--------|----------|-----|--------|
| Duroxon | H-111 | | 100 | lbs. |
| Emulpho | gene A | M-870 | 30 | lbs. |
| Water | | | 720 | lbs. |
| | | | 850 | lbs |

| B-Alkali | | Polyvinyl | Acetate |
|------------------------|--------|-----------|----------------------|
| Solutio Vinac | ASB-10 | 127 | lbs. |
| Ammonia (28%) Water | | | 1/2 lbs. 1/2 lbs. |
| | | 8 | 50 lbs. |

Final Composition

ly

S-

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le.

ES

A-30 parts by volume B-70 parts by volume

As indicated in Table VIII the polymer floor finish as shown in Table VII compares favorably with the shellac type of product. Its gloss, while satisfactory, was not as high as the shellac film. The leveling properties also were considered good though not quite as

| A—Self-Polishing Base | | | | | |
|------------------------------|------|----------|--------|-----|------|
| Duroxon J-324 | | | | 66 | lbs. |
| AC polyethylene 629 | | | | 17 | lbs. |
| Microcrystalline wax (185-19 | C°F) | | | 17 | lbs. |
| Oleic acid | | | | 10 | lbs. |
| Morpholine | | | | 10 | lbs. |
| Borax | | | | 8 | lbs. |
| Water | | | | 722 | lbs. |
| | | | | 850 | lbs. |
| B—Leveling Resin | | | | | |
| Loba C gum | | | | 115 | lbs. |
| Ammonia (28%) | | | | 38 | lbs. |
| Water | | | | 697 | lbs |
| | | | | 850 | lbs |
| Final Composition | | | | | |
| A—Self-polishing base | 85-8 | parts by | volume | | |
| B-Leveling resin | 15-2 | parts by | volume | | |

good as the natural resin based product. In all other respects, the polymer product was rated as equal or superior to the shellac product.

Colloidal silica has been, and still is, being used to impart supresistant properties to wax emulsions. However, when properly formulated, the use of some of the polymers listed results in products possessing outstanding slip-resistance, as well as film-forming and buffability characteristics.(9)

Our final formulation shown in Table IX shows a self-polishing, highly buffable floor finish possessing excellent anti-slip properties. This formulation is suggested for heavy duty maintenance applications. The Duroxon J-324 combined with a smaller quantity of polyethylene forms an excellent foundation for a glossy, tough, highly buffable self-polishing base. The microcrystalline wax is used as a

"bodying agent" and to somewhat decrease the transparency of the emulsion. Its use is optional.

Loba C resin, as the leveling additive, has been found to be compatible with the emulsifiable Fischer-Tropsch and polyethylene polymers. It contributes good gloss, outstanding water resistance and quickly hardens with the self-polishing base on drying. It is better in the latter respect, in the formulation presented, than alkali soluble synthetic resins which tend to plasticize the wax film, at first, and slightly retard the hardening of the self-polishing base.

Summarizing briefly — today's floor wax is entirely different, in many instances, from the one merchandised about ten years ago. The availability of promising new raw materials, some of which were discussed here, has definitely accelerated new trends in floor wax formulations. Current developments and scientific achievements will insure that this modern trend to better floor wax formulations will continue in the future.

Table VIII. Comparison of Properties

| Tuble | tuble viii. Comparison of Froperices | | | | | | |
|----------------|--------------------------------------|-----------------------------|--|--|--|--|--|
| | Average Shellac Type | Polymer Type (Table VII) | | | | | |
| Stability | Excellent | Excellent | | | | | |
| Leveling | Excellent | Good | | | | | |
| Gloss | Excellent | Very good | | | | | |
| Water spotting | Poor | Excellent | | | | | |
| Color (film) | Yellows with age | Excellent | | | | | |
| Scuffing | Excellent | Excellent | | | | | |
| Removability | Poor upon aging | Excellent | | | | | |

References

- 1. Schwarcz, L., Sanitary Products, p. 112.
- CSMA First Annual Product Survey, Waxes and Floor Finishes.
- 3. Kroner, A. A., Soap and Chemical Specialties, p. 163, Nov., 1955.

(Turn to Page 173)

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Aerosol Industries Division of Zenith Drug, Inc. 1 Vesey Street Newark, N. J.

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Eveready Pressurized Products, Inc. 1022 Belt Line St. Cleveland, Ohio

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GENETRON 101-Monochlorodifluoroethane

GENETRON 320/101 MIXES

GENETRON 226-Trichlorotrifluoroethane

GENETRON 141-Monochlorodifluoromethane

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C.S.M.A. Meets

(From Page 123)

cost per unit are among the advantages offered by phenolic compounds, such as orthophenylphenol. The speaker stressed the importance of performance testing of detergent-sanitizer formulations because of the large number of variables involved.

"Iodophors as Detergent-Sanitizers", a paper by Perry G. Bartlett, West Disinfecting Co., Long Island City, N. Y., was read by Albert Katz.

Iodophors were described as solutions of elemental iodine in a surfaceactive agent, usually a nonionic. In this form previously only slightly water soluble iodine can be dissolved in water without precipitation. The detergent power of the nonionic and the germicidal power of iodine combine to make iodophors efficient single-operation detergent-sanitizers. Because iodophors exhibit their greatest germicidal activity at a pH of three or 3.5, it is desirable to acidify these products. This is usually done with either phosphoric, acetic or hydroxy-acetic acid. This addition of acid offsets the pH raising effect of hard water and eliminates any spotting or film formation on the articles being cleaned. At the usual use dilution of 1/500, iodophors do not irritate the skin and show low toxicity. In addition to good germicidal activity they exhibit virucidal properties. Effective at low temperatures, iodophors do not have the corrosive characteristics associated with other forms of iodine and have a "built-in" color indicator. Iodophors are suggested for use in dairies, breweries, institutions, and as general household cleanser-sanitizers

Harry H. Borowsky, Onyx Oil & Chemical Co., Jersey City, N. J., presented a study of "Quaternary Detergent-Sanitizers".

Quaternary ammonium compounds are efficient germicides covering a wide range of microorganisms, exhibiting almost equal activity against gram positive and gram negative bacteria. They retain bactericidal power in the presence of a moderate amount of organic matter, such as 10 percent skimmed milk. Quats are cationic surface active agents with poor detergent properties. However, their compatibility with nonionics makes it possible to formulate combinations which are efficient detergent-sanitizers. Quaternaries are effective at an alkaline pH range, preferably nine and over. The addition of a sequestrant to quaternary formulations is desirable because certain substances, present in hard water, inhibit the antimicrobial action of quats. Phosphates are suggested for this purpose because they act as builders as well as sequestrants. Quaternaries are odorless, colorless, and non-toxic, which fits them for use in the milk and food industry. A one-to-one ratio of quaternary to nonionic is satisfactory, not more than two parts of quat to one of nonionic should be used. A typical formulation may contain 10 parts of 50 percent quaternary solution, five parts nonionic, three parts Na2CO3, and 50 parts tetrasodium pyrophosphate.

Chlorine - based detergent sanitizers have a ready - made market in the American home, John A. Quinn of Theobold Industries, Kearny, N. J., asserted in his presentation. Liquid bleaches in some form are used by approximately 88 percent of all households in this country. Half of these bleaching compounds are employed for sanitizing purposes. However, under conditions prevailing in the home these products are inefficient sanitizers. They require specialized conditions and skilled application. A notable exception among chlorine based products is dichlorodimethylhydantoin, Mr. Quinn said. When formulated with an anionic it functions as an all-purpose detergent-sanitizer with adequate bleaching action. A typical formulation contains six percent anionic detergent and 25 percent complex phosphates and other builders.

Last paper in this session was given by L. S. Stuart, U. S. Department of Agriculture, Washington, D. C., who spoke on "Labeling of Detergent-Sanitizers."

He defined this group as products performing a cleaning task and reducing the bacterial count. If used in the dairy and food fields they must be registered aseconomic poisons. As such they must be labeled with adequate use directions. Concentration, mode of application, etc., must be clearly indicated. Labeling requirements are influenced by claims made for the product and by the intended end use. If a water rinse is required to remove a residue this must be clearly stated on the label. If claims of conformity with certain laws are put forward these claims must be specified.

In the janitorial field, few ordinances exist, Mr. Stuart said. It is imperative that a concentration be specified which will disinfect, if the product is to be sold as a one step detergentsanitizer. Performance checks of label claims are made by the department by simulated use tests, such as the dairy use test.

Aerosol Division

BRIGHT future for aerosol packaging of food products was forecast to the Aerosol Division at its meeting the afternoon of Dec. 6 by Earl Graham, Crown Cork & Seal Co., Can Division, Philadelphia, in his paper on "Food Aerosols." Although several problem areas exist in pressure-packaging of food products, the solution to many of these obstacles may be available shortly as the result of research on non-food aerosols.

Physical stability ranks high among the factors that are encountered in food aerosol packaging. The high viscosity of foods like peanut butter, marshmallow and cheese spreads, for example, makes it necessary for them to be reformulated before they can be dispensed from an aerosol container. But still other problems are added to those

H. W. Hamilton, CSMA secretary, with E. G. Klarmann of Lehn & Fink Products Corp., New York, newly elected president of CSMA and Michael Lemmermeyer of Aromatic Products, Inc., New York, artist who painted pictures in background Art display was part of the aerosol exhibit which took place during the meeting.



already existing when a product is reformulated. To lower the viscosity of peanut butter, its oil content must be increased. However, this step makes the product physically unstable, presenting yet another technical obstacle that has to be solved.

"Properties of Two Low Pressure Propellants" was the subject of a paper by John H. Beacher, General Chemical Division, Allied Chemical & Dye Corp., Edgewater, N.J. The properties of two low pressure "Genetron" propellants used in glass and plastic aerosol containers were outlined separately. These properties included density, solubility, vapor pressure, hydrolysis and toxicity.

How visual inspection alone of corrosion in aluminum containers often is misleading was described in a paper by Morris I. Root, G. Barr & Co., Chicago, on "Corrosion Testing of Aerosol Containers." Some products have been found to have as many as 700 p.p.m. of dissolved aluminum without there being any visual evidence of such a high rate of corrosion. This may be attributed to the fact that since the aluminum oxide coating within the container is highly resistant to corrosion, breaks in the oxide film always take the form of tiny pin holes that are invisible to the naked eye.

"Peracetic Acid in Aerosols" was the subject of three papers delivered consecutively to the Aerosol Division. Dr. Frank P. Greenspan, Becco Chemical Division, Food Machinery & Chemical Corp., Buffalo, N.Y., discussed "The Raw Materials." Montfort A. Johnson, Peterson Filling and Packaging Co., Danville, Ill., presented a paper on "The Packaging Aspects" and Dr. P. C. Trexler, Lobund Institute, University of Notre Dame, Notre Dame, Ind., discussed "Germicidal Activity of Peracetic Acid Spray."

A one per cent aqueous solution of peracetic acid has been found to be effective against Bacillus stearother-mophilus spores within 30 seconds. The vapor from this same solution has the same effect in five minutes. Sprays of this solution have been used success-

Du Pont 1955 Aerosol Consumer Survey

THE fourth study on consumer attitudes towards aerosol products showed that 91 out of 100 families interviewed in a nationwide survey have purchased one or more of a hundred different types of home aids now available in aerosol form. The survey was conducted for the Kinetic Chemicals Division of E. I. du Pont de Nemours & Co., Wilmington, Del., by Batten, Barton, Durstine & Osborn, New York advertising agency.

The surveys on consumer and dealer attitudes are conducted in alternate years. The 1955 consumer survey shows insecticides still maintain a sizable lead over all other products as the most frequently purchased aerosol item. It showed that 766 percent of the 4,305 families polled had purchased aerosol insecticides for use against flies, mosquitoes, and other flying insects, while 52 to 59 percent had tried the three next most popular aerosol products: room deodorants, hair sprays and insecticides for use against crawling insects.

Consumer satisfaction with aerosols, competing in most cases with similar products in other types of containers, also rated high in the 1955 study. More than half the purchasers said that they were completely satisfied with the aerosol method of application because of its ease of use, effectiveness and lack of messiness.

Many relatively new items showed fast growth in the two years since the last du Pont consumer survey. Shave creams, for example, had been purchased by only two percent of those interviewed in 1951, and 11 percent in 1953, but had been tried by 27 percent

of those polled in 1955. Ahead of aerosols, percentagewise, were electric shavers at 37 percent last year, and brush lather at 28 percent. However, electric shaver purchases showed only an 11 percent growth over the last four years, and brush lathers had fallen off 17 percent from the 45 percent purchase figure reported in 1951.

Among other aerosol products mentioned specifically in the 1955 study, artificial snow had been purchased by 38 percent of those surveyed, while 37 percent said they had bought aerosol mothproofing sprays. From 14 to 18 percent of those polled said they had purchased hair dressings, anti-perspirants, paints and lacquers or perfumes and colognes in push button packages, while farther down the list were these aerosol products: hand lotions, 14 percent; suntan lotions, eight percent; plastic protective sprays, seven percent; hair shampoos, four percent; burn sprays, three percent, and athlete's foot remedies, two percent.

Food and grocery stores were favorite purchase points for insecticides and room deodorants, the survey indicated, while drug stores, as might be expected, were first choice in the case of personal toiletry items like deodorants, hair sprays, shave creams, shampoos and suntan lotions. Indicating an interesting trend in merchandising, food and grocery stores ranked next to drug stores as the favorite type of retail outlet for purchasing shave creams and hair shampoos.

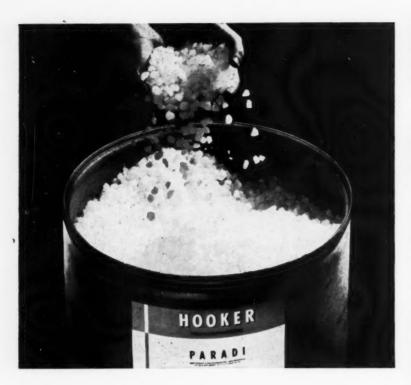
The study indicated that aerosol sales were being made just as often in rural areas as in urban markets.

fully since 1950 to sterilize protective garments and hoods for handling pathogenic material and in rearing germ-free animals.

The annual Du Pont survey of consumer purchases of aerosol products was presented by Don C. McSorley, Kinetic Chemicals Division, E. I. du Pont Nemours & Co., Wilmington, Del.

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A. E. Budner, S. C. Johnson & Son., Inc., Racine, Wis. The session's first paper, delivered by Melvin Fuld, Fuld Bros., Inc., Baltimore, was titled "Compilation of Acid and Saponification Numbers According to Suppliers' Method of Testing and ASTM Proposed Methods, Including Hydro-Carbon Content by ASTM 1342 for Waxes."

Kurt J. Wasserman, Dura Commodities Corp., New York, then spoke on "Modern Trends in Floor Wax Formulations." The complete paper begins on Page 127 of this issue.

"Motivational Research: What Makes People Buy?" was presented by Irving Gilman, Institute of Motivational Research, Croton-on-Hudson, N.Y. This was a discussion of how psychological factors influence even the purchase of waxes and floor finishes. The key to successful selling of these products, Mr. Gilman pointed out, lies in making the housewife feel that the manufacturer is fully aware of the special significance of the floor area in her home and helping her to meet her psycho-economic needs.

The fourth presentation in this session dealt with "A Comparison of the Behavior of Carnauba Wax and Gersthofen Wax KPS in the Manufacture of Self-Polishing Emulsions" by Dr. Wolfgang Sapper, Wax & Rosin Products, New York. It was emphasized that much less emulsifier is needed in KPS emulsions than in carnauba wax emulsions. When the same amount of emulsifier is used in both waxes, the excess will tend to soften the KPS wax film. But comparative tests of the hardness of the two waxes have shown that KPS wax is as hard as prime yellow carnauba wax. Similarly, measurements of the softening effect of amine soaps upon these waxes indicate that KPS is less softened by amine soaps than carnauba wax.

The session was concluded by H. J. Mellan, Durez Plastics and Chemicals Division, Hooker Electrochemical Co., Niagara Falls,

N.Y., who reported on the work of the CSMA waxes and floor finishes scientific committee, of which he is chairman.

Soap, Detergents

THE Soap, Detergents and Sanitary Chemical Products Division heard five papers on the afternoon of Dec. 6.

The use of trichloroisocyanuric acid as a solid bleach and sanitizing agent was described in a paper by R. G. Ditzel, P. G. Arvan, Louis Fernandez, and W. F. Symes, of Monsanto Chemical Co., St. Louis, presented by Mr. Ditzel, Marketed by Monsanto under the trade name "ACL-85" trichloroisocyanuric acid is a solid crystalline organic chlorine-bearing material which produces hypochlorous acid in solution. In its commercial form the product analyzes about 90 percent available chlorine. At a use concentration of 25 ppm and moderate temperatures the product is a satisfactory bleach, does not impair the tensile strength of cotton.

For use as a sanitizer, trichloroisocyanuric acid is formulated with an anionic detergent. Such compounded products show a loss of one half percent available chlorine in a month. "ACL-85" is not compatible with nonionics and the presence of carbonates as builders also has an adverse effect. The product is stable at pH 3 to 9, shows degradation at pH 9 to 11, and improving stability at pH 11 1/2 and over.

"High Activity Alkylolamide Detergents" by H. L. Sanders, O. E. Libman and Y. D. Kardish, Ninol Laboratories, Inc., Chicago, was read by Dr. Sanders. The complete paper appears beginning on page 33 of this issue.

The soil line on shirt collars and cuffs is easily removed by direct application of a concentrated surfactant to the dry fabric as a spotting agent prior to laundering. This was revealed in a paper by M. E. Davis, Atlas Powder Co., and H. E. Stanley, E. I. du Pont de Nemours & Co., Wilmington, Del., entitled "Spotting Agents for Washable Fabrics." The complete paper appears beginning on Page 40 of this issue.

Characterization and quantitative analysis of nonionics by various methods and some novel approaches were studied by A. B. Steele and L. D. Berger of Carbide and Carbon Chemicals Co., New

Characterization of nonionics has achieved by colorimetric, and gravimetric procedures, Mr. Berger reported. Newer methods use the hydroxy values, the phthalic anhydride-pyridine reagent, or relate "cloud point" of nonionics with specific gravity. Cloud point is the temperature at which nonionic agents separate from dilute aqueous solution as a second liquid phase. The last procedure is particularly useful in defining the hydrophobic component of the nonionic. The cloud point-specific gravity method has been applied to over 100 commercial nonionics derived from alkylphenols, alkyl mercaptans, aliphatic alcohols, and tall oil, Mr. Berger said. All these procedures suppy information concerning chemical nature, purity and concentration of these compounds. None of them constitutes an adequate quantitative measure of nonionic surfactants.

Committee D-12 of the American Society for Testing Materials is currently working on an infrared method for quantitative measurement. This, however, will not be applicable to polyoxyethylene glycols. a group on which many modern household products are based. A quantitative method has been developed which involves the determination of oxyethylene content, Mr. Berger said. A modified alkoxyl is employed in which hydrogen iodide decomposes the polyglycol structure into ethyl iodide and ethylene, which are collected and determined volumetrically in standard solutions of silver nitrate and bromine, respectively. A detailed description of the method and apparatus required, including illustration, was supplied by the

The session closed with a brief report by J. C. Harris on the work of the scientific committee of which he is chairman.

Dec. 7 Luncheon

DISCUSSING "People — You Should See the 1956 Models", Dr. Millard C. Faught of Faught Co., New York management consultant firm, said that while 1956 may herald many new models and kinds of gadgets in a dynamic atomic-electronic chemical age, industry will still be dealing with the same "old-fashioned" kind of human nature. He also told the group luncheon on Dec. 7 that "modern tools are no substitute for the worker's desire to do creative work-and have others appreciate his human contribution."

The most profound change of recent date, according to Dr. Faught, is that we are now living an "extra half lifetime" as compared with earlier generations. "The 20 year gain in American life expectancy since 1900 is equal to all the prior gains since the birth of Christ. A great challenge therefore confronts us as the modern gen-eration of human beings," he pointed

"How are we going to adjust our

There's something different about



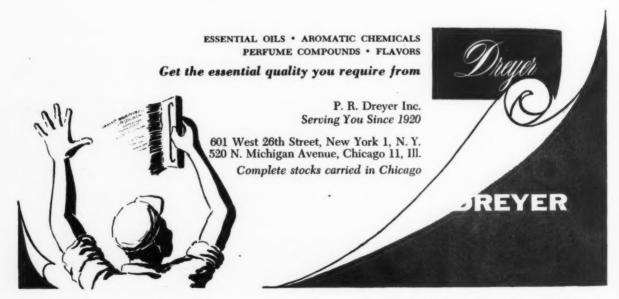
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to have still less to do in—as people."

"And ironically," concluded Dr. Faught, "This is a challenge which every individual must ultimately meet for himself or herself. Parents can give helpful guidance and sacrifice to pay tuition for learning; communities can collect taxes and build social facilities; and government can collect more taxes and provide 'social security.' But only individuals can live lives.

"In terms of good old stubborn human nature, the 1956 model people will be almost indistinguishable from the 1856 models; their environment almost totally changed."

Aerosol-Insecticide

A combination low pressure, aerosol insecticide - deodorant was described in the opening paper of the joint Aerosol-Insecticide Divisions meeting, the afternoon of Dec. 7. The paper, "Chlordane and Quaternary Ammonium Compounds in Low Pressure Aerosols—Insecticide, Deodorant Applications", was presented by Leo Trademan of Velsicol Chemical Corp., Chicago. The paper is published beginning on page 149 of this issue.

A device for analyzing particle size of aerosol dispensed products was described in a paper, "The Cascade Impactor for Particle-Size Analysis of Aerosols", by J. M. Pilcher, R. I. Mitchell, and R. E. Thomas of Battelle Memorial Institute, Columbus, O.

Applications of the cascade impactor can improve the effectiveness of commercial aerosols, such as insecticides and paint sprays, according to the authors. The instrument is said to be well adapted for size analysis of aerosols composed of particles from 0.1 to 20 microns in diameter. The impactor operates on the principle that a particle in a moving aerosol impacts on a slide placed in its path provided the inertia of the particle is great enough to overcome the drag force that tends to move the particle around the slide. A classification of the particles into different size fractions is achieved by successive increases of the velocity of the aerosol through the various stages of the impactor

Advantages of the cascade impactor, according to the authors, are



Dr. Milliard C. Faught of Faught Co., New York, management consultant firm, discusses, "People—You Should See the 1956 Models," Dec. 7. At right, Dr. Klarmann speaking following his election as president.

1.) a relatively large sample may be collected, 2.) microscopic counting eliminated in routine analysis, and 3.) the bias resulting from evaporation and non-representative sampling is minimized. Comparison with simple methods of sample collections, based on waving a microscope through an aerosol, indicates that the cascade impactor provides much more detailed and accurate size-distribution data. Following calibration of the impactor by microscopic methods, rapid methods of anlysis based on gravimetric, colorimetric, fluorometric, or radiochemical procedures may be used.

The "importance of corrosion studies with aerosol products has not been emphasized in proportion to the losses", R. A. Fulton of the Entomology Research Branch, Agricultural Research Service, U.S. D.A., pointed out in his paper "Corrosion Studies of Aerosol Containers."

Ways to detect corrosion as outlined by Mr. Fulton include the use of a good oscilloscope, since corrosion is usually associated with metallic couples or galvanic cells. The internal resistance of a laboratory or radio type voltmeter varies with the type of meter from 10,000-20,000 ohms for D. C., which will give no reading where little current is developed.

If corrosion is suspected but the effect has not become visible, analysis of the solution for the metals used in the container, container lining, or valve may give valuable information.

An inexpensive bedside X-ray unit may be used to detect corrosion within containers. After the corrosion has started in the pores of the tin or lacquer lining, the pits will appear on the X-ray film as black spots.

For preliminary tests with aerosol products the most satisfactory method is to cut long narrow strips from the container being tested and place them in a pressure test tube. When the test tube is filled with the test solution, leave 1/3 of the metal strip exposed to

the vapor phases. After several days the strips should be examined under a microscope to determine action around the pin holes or under the lacquer lining. The aerosol solution should also be analyzed for traces of iron, tin or other element if different coatings are used. If corrosion is found and the analysis does not detect the presence of elements in the container, lining or solution, it is advisable to look for trace elements that might have been used in the processing of the containers or valve. Lubricants used in the dies for drawing the wire for springs have been found to accelerate corrosion,

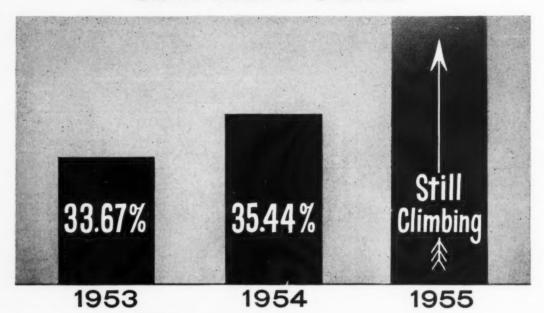
If laboratory equipment includes a good oscilloscope with a sensitivity of 0.025 volt, connect the suspected components of the valves or containers as electrodes and determine the presence of any galvanic action.

The concluding paper of the joint session was a discussion of "Some Aspects of State Laws Affecting Sales of Household Insecticides", by A. B. Heagy, secretary-treasurer Association of American Pesticide Control Officials.

In his paper Mr. Heagy pointed out that since the passage of the first pesticide statute by New York in 1898, 42 states, Hawaii, Puerto Rico, Canada and the Federal government have adopted laws govering the sales and distribution of these products. Of this number, 39 control sales of household pesticides. With the development of DDT and related chlorinated compounds came the enactment and amendment of many state laws. In the first five-year period between 1945 to 1950, 20 states and the Federal government either revised old laws or adopted new ones extending the scope of these controls. From 1950 to the present, 19 others completed legislation. Two states en-tered the field January 1 of this year. It is anticipated that at least two others will either revise or enact laws during the legislative sessions of 1957. The remaining areas continue to operate under old statutes, or have such limited cover-

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Disinfectant, Sanitizers

A new germicide was discussed at the afternoon session Dec. 7, of the Disinfectant and Sanitizers Division.

A paper dealing with experimental quaternary "3104" by W. E. Botwright, A. B. Low, W. D. Niederhauser, and J. L. Rainey, Rohm & Haas Co., Philadelphia, was read by Mr. Botwright. Dimethyldidodecenylammonium chloride is a white powder prepared by reacting dodecenyl chloride with dodecenyl dimethyl amine. The compound is available in limited commercial quantities in a 70 percent aqueous solution and in a 60 percent isopropanol solution, which is soluble in many organic liquids. Aqueous solutions of the new quaternary exhibit low surface tension and possess outstanding wetting and rewetting properties. Quaternary "3104" is chemically and phys'cally compatible with nonionics, carbonates, silicates, phosphates and organic sequestrants, generally used in compounding detergents. The solubility characteristics of the quaternary call for special care in formulation. Highly active against a wide range of microorganisms including bacteria, viruses, yeasts and molds, the product has a use dilution against bacteria and fungi of 1-4000. Its effectiveness in very hard waters was stressed by Mr. Botwright. Suggested uses for the new quarternary include general disinfectants, fungicides, and deodorants, food utensil sanitizers, and as fabric antiseptic and antistatic agents. Proposed formulations are available for disinfectants, detergent-sanitizers, pine type disinfectants, and fabric softeners.

Antibiotics and fluorinated compounds tested for fungicidal activity in the protection of materials against deterioration caused by fungi were the subject of the next paper. At the Wright Air Development Center, Wright-Paterson Air Force Base, Dayton, Ohio, experiments in this field were conducted over the past five years. Results to date were outlined in a paper by Alton E. Prince and Sam Bakanauskas delivered by Mr. Prince.

Among true antibiotics most promise was shown by endomycin, benzyl muchochlorate, rimocidin, comirin, and netropsin sulfate. With four test fungi used, these antibiotics inhibited growth from 100 down to one part per million. Because endomycin showed better physical and chemical properties it was selected for treating cotton airplane cloth. Cloth impregnated with 0.76 percent of the chemical, based on dry weight of the fabric, exhibited

high fungus resistance, stability when exposed to 100°C for one hour, and no change when exposed to utlra-violet light for 10 hours,

The most potent fungicidal activity was exhibited by fluorinated mixed-halogen dinitrobenzenes. The most active were 1-fluoro-3-bromo: 1fluoro-3-chloro-; and 1-fluoro-3-methyl-4,6-dinitrobenzenes. These compounds are effective as preservatives in materials at 0.5 percent and below. But they are toxic to man when used much above this level. Therefore, they were set aside in favor of the slightly less fungicidal but less hazardous fluorinated biphenyls and the biphenyl sulfide. This group includes 2,2' - dihydroxy - 5,5' - difluorobiphenyl; 3,3'-difluoro-4,4'-dihydroxy - biphenyl; 2,2'-dihydroxy-3,3'-,5,5'-tetrafluorobiphenyl and 2,2'-dihydroxy-5,5'-difluoro-diphenyl sulfide. In a range of one half to one percent these compounds are highly effective while being nontoxic to humans up to about 1.5 percent.

Initial screening of these leather, cotton, and plastics preservatives was done under contract. Antibiotics were screened at the University of Rhode Island, while the fluorine compounds were tested at the University of Ill'nois by the State Natural History and Geological Survey Divisions.

Keith H. Lewis, Chief of Milk and Food Research, Robert A. Taft Sanitary Engineering Center, Cincinnati, Ohio, delivered a paper entitled: "The Evaluation of Chemical Germicides for Sanitation of Milk and Food Equipment."

Stressing the importance of government-industry cooperation, Dr. Lewis outlined the function of the U. S. Public Health Service. The service carries legal responsibility for sanitation aboard interstate carriers and functions as an advisory agency to states, municipalities and other local authorities in formulating legislation for local adoption.

The Milk Ordinance Code, currently under review, is an example of legislation developed by the Federal health service which has been adopted as law by 34 states, Legislation relating to interstate shippers of shellfish and the Poultry Ordinance are other examples of legislation developed by the U. S. Public Health Service and adopted by the majority of states and territories. Most of the work leading to rules for the certification of milk and of shellfish shippers has been and is the responsibility of the Division of Sanitary Engineering.

The technical service for the division is carried out at the Robert A. Taft Center. An example is the evaluation of germicides and the development of new modes of application, etc. The center performs this service also for local authorities who are not equipped to run adequate tests.

Changes in the Milk Ordinance Code of 1953 are currently being made.

The code itself has legal status and is therefore undergoing only editorial changes. The changes in content are being made in appendix F of the code, which deals with bactericidal treatments. Final version of these revisions has been held up by failure of industry and government agencies to reach an agreement. In part 2 of appendix F, which deals with chemical bactericides the provisions for quaternary ammonium compounds have been amended and changes in the stipulations concerning inhibition by water hardness have been made. The existence of tableted reagents for the field testing of quats is acknowledged, but there is as yet no standard test for field use. In a section on other bactericides new test procedures not previously included are now recognized, 50 ppm chlorine and pH 10 is set up as standard. No detailed criteria have been accepted for detergent-sanitizers in part 3 of the appendix, Surfaces must be visually acceptable and 99.999 percent kill of bacteria in 30 seconds is stipulated at a concentration equivalent to 50 ppm of chlorine. Where water has been bactericidally treated toxic residues must be kept at a safe

A. G. Wedum, safety director, Camp Detrick, Frederick, Md., was scheduled to present a paper on "Chemical Decontamination in the Army Biological Warfare Research and Development Laboratories." However, the paper was not passed by the authorities because, Dr. Wadum said, it was "too interesting." He read a paper which he had previously presented at a gathering of pharmaceutical manufacturers. It dealt with research on chemoprophylaxis and chemotherapy against respiratory challenge of man in biological warfare.

Wax-Soap Session

JOINT session of the Waxes and Floor Finishes Division and the Soap, Detergents and Sanitary Chemical Products Division was held the afternoon of Dec. 7 with A. E. Budner, S. C. Johnson & Son., Inc., Racine, Wis., presiding. The first paper delivered at this session was "Commercial Maintenance of Floors" by Roy Varner, Penn Mutual Life Insurance Co., Philadelphia. This presentation was a case history of floor maintenance procedure in the 20story Penn Mutual home office. Mr. Varner called upon floor material manufacturers to specify the type

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|---|---|---------------------------------------|---|--|---|---|
| Specific Gravity @ 25/25°C. | 0.963 | 0.9275 | 0.899 | 1.018 | 0.9855 | 0.952 |
| Boiling Range 5-95% @760m.m.Hg °C °F | 123-126 254-258 | 133-136 271-277 | 166-173 330-343 | 189-195 372-383 | 197-203 387-397 | 225-233 437-450 |
| Viscosity CPS @ 25°C | 1.532 | 1.838 | 2.83 | 3.467 | 3.780 | 4.92 |
| Flash Point °F (COC) | 125 | 110 | 160 | 210 | 205 | 225 |
| Dilution Ratio: Toluol L. D. Naphtha | 4.0 | 5.2 1.1 | 3.3 | 2.3 | 1.9 | |
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"Preparation and Maintenance of Floors For Waxing" by Adrien duBois, West Disinfecting Co., Long Island City, N.Y., was the second paper in this session. This paper emphasized that an application of oil prior to waxing enhances a floor's gloss. Mr. duBois further stated that an oil coating also helps to remove dust from the floor.

Gerald R. DeNapoli, Masury-Young Co., Boston, then delivered a paper on "Industrial Floor Coatings" in which he declared that a glossy store floor attracts patrons, reduces merchandise spoilage and boosts storewide sales. An ideal wax should resist heel marks, yellowing and spotting and should be easily removed even after aging, Mr. DeNapoli concluded.

Sponge mops have made the scrub brush "obsolete" as a cleaning tool in the home, declared Fred C. Kraatz, S. C. Johnson & Son, Inc., Racine, Wis., in his presentation of "Floor Maintenance Problems in the Home." And just as equipment becomes outmoded, so, too, do waxes, Mr. Kraatz pointed out. For example, although the wax business was built on paste wax, today liquid waxes comprise the greater proportion of wax sales.

In his paper on "Maintenance of Asphalt Tile," Paul J. Harriman, B. F. Goodrich Co., Watertown, Mass., described the findings of the Taber scratch test in determining how much surface deterioration occurs from the use of various tile cleaners. This Asphalt Tile Institute test consists of producing a scratch with the standard Taber instrument under a 500gram load both before and after the specimen has been immersed for 24 hours. The cleaner is considered too severe if the width of the scratch increases more than 40 percent.

"Cleaning and Maintaining of Rubber Flooring" was the subject of a paper by Merrill M. Smith, American Biltrite Rubber Co., Trenton, N.J. Three factors are chiefly responsible for the poor appearance of many rubber floors. They include use of oily mops, wax build-up and excessive water use.

Walter F. Wegst, Wyandotte Chemicals Corp., Wyandotte, Mich., in presenting his paper on "Cleaning Floor Coverings," said: "Many floor maintenance procedures not usually considered safe on certain floors may be successfully applied under expert supervision. But, in general, most properly tested products supplied by reputable firms are completely safe only when used as directed by the

manufacturer of the product."

The final paper of the joint session was presented by Dr. George O'Hare, Congoleum-Nairn Corp., Kearny, N.J. Dr. O'Hare pointed out that 65 percent of all floor coverings sold today are made of linoleum or felt base despite the inroads made by vinyl, rubber tile and other materials. And while linoleum is priced at an average of \$2.50 per square yard, felt base is relatively inexpensive at approximately \$1.00 per square yard, thus giving the consumer a choice of price ranges.

Representatives of leading Argentine insecticide manufacturers celebrated the closing of the year with a banquet sponsored by the Camara de Fabricants de Insecticidas Y Afines (Association of Manufacturers of Insecticides and Related Products) on Dec. 8 in Buenos Aires. According to E. B. "Pat" Twyman of John Powell & Cia, S. A., who sent us the pictures, the association, like the old NAIDM, predecessor of CSMA, has grown from humble beginnings, but "by demonstrating the mutual benefits to be derived from cooperation," has grown into an active organization, John Powell & Cia, S. A., played an important part in the organization at the outset and has been continuously represented on the board of management. The current president of the organization, Senor Felipe Marvaso, is also a member of the board of Delbene Hermanos y Sabia Ltd., one of the largest manufacturers of soap and household sanitation supplies in Argentina. Its products are marketed under the name, "Jabon Federal."



Officers of Camara de Fabricants de Insecticidas Y Afines, shown in the photograph below, include, left to right, J. Mario Meligrana, secretary; Lino Scalabrini; Felipe Marvaso, president; Edwin B. Twyman, John Powell & Cia.; and Carlos A. Ponce, pro-secretary, at the head table during the banquet of the association in Buenos Aires.



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AMA Panel on Chemical Hazards

"HOW Dangerous Are House-hold Chemicals and Agricultural Poisons to the General Public?" was the title of a panel discussion sponsored by two committees of the American Medical Association at the 122nd meeting of the American Association for the Advancement of Science held on Dec. 29 at the Hotel Henry Grady, Atlanta, Ga.

The panel was made up of six experts from the A.M.A.'s Committee on Toxicology, which studies problems associated with household cleaners, solvents, paints, polishes and the many common drugs found in the home medicine cabinet, and the Committee on Pesticides, which studies health problems associated with the use of insecticides, herbicides and similar types of so-called economic poisons.

Bernard E. Conley, secretary of the two committees and panel moderator, said that "the many new chemicals, which are responsible for making our daily lives more comfortable, complicate the health picture, and consequently these new chemical products must be handled with care and understanding. Many of these chemicals which are widely used in agriculture and industry are finding their way into the home through household products. Therefore, the degree of protection becomes more complicated because there are no direct channels for informing the user at home of any hazardous effects that might exist. The job of warning the home user is far more difficult than warning the worker in either agriculture or industry."

Mr. Conley added that the growing multiplicity of potentially harmful exposures to chemicals is poorly understood even by physicians and scientists and consequently the problem is more serious than the average person realizes.

The harmful effects of chem-

icals on the skin were discussed by Mrs. Veronica L. Conley, secretary of the A.M.A. Committee on Cosmetics. "Two-thirds of all compensated occupational diseases are skin complaints," said Mrs. Conley, adding: "In the home, the figures are no less impressive. Hand eczema among housewives has become so frequent that the term 'housewives eczema' is generally accepted to describe the external irritant dermatitis resulting from contact with cleansing agents in housework.

"This high incidence of contact dermatitis is not surprising since all chemicals can cause skin reactions under favorable circumstances. Prolonged use, excessive perspiration, various skin types, lack of cleanliness, friction and abrasion render the skin more vulnerable to irritation or sensitization by contacting chemicals.

"In contact dermatitis, the leisions are often limited to the area of contact, although a generalized reaction can occur. The principal point in treatment is to discover and eliminate the offending agent or substance. Many patients aggravate their condition by overtreatment. The public has a common tendency to apply preparations of every sort to the skin. This is encouraged by the huge and uncontrolled market in proprietary skin remedies, most of which contain a hodge-podge of potentially irritating and sensitizing drugs."

Dr. Lester M. Petrie, director, preventable disease services of the Georgia Department of Public Health, discussed the health problems of industrial chemicals. "There are life and death hazards in every branch of chemistry," he said, adding: "There may be risks all along the line, to industrial workers, to processors, to distributors, to agricultural or household users and even possibly to consumers of foods, which have been treated."

Summing up the panel's consensus of opinion on the dangers of household chemicals, Mr. Conley declared that top priority in accident prevention programs should be given to: (1) increasing the safety awareness of laymen; (2) wider use of precautionary labeling on products; and (3) more accuracy in death certificates and hospital records through proper identification of the poisonous agents.

Booklet on Aerosols

A 24-page booklet on aerosols, with particular emphasis on their perfuming, was announced recently by Polak & Schwarz, Inc., New York. Since, as the foreword of the booklet points out, "one of the main problems is the perfuming of the product," Polak & Schwarz has established a special research unit for aerosols. However, the company's research department studies not only perfumery ingredients but all other aspects of aerosols. For this purpose it maintains a complete aerosol laboratory, which includes a filling installation, which is available to its customers.

The first section of the booklet deals with definitions of various phrases and words used in aerosol technology, and also gives a brief history of the development of pressure packed products. Principles and composition of aerosol products are discussed including active ingredients and containers.

A third section deals with general problems such as technical aspects of filling, compatibility of components, pressure, nature of spray or foam formation, inflammability, stability and perfuming.

A summary of the most important and specific problems involved in the formulation of the principal types of aerosol products concludes the booklet, which also carries a listing of Polak & Schwarz offices and branches throughout the world.

Copies of the booklet are available by writing the company at 667 Washington St., New York 14, N. Y.

Termite Repellents Report

The toxic qualities of 37 termite repellents were evaluated in field investigations carried out in the jungles of Panama by the Naval Research Laboratory. Results are reported in a ten-page publication entitled "A Field Evaluation of Termite Repellents" (PB 111 737) which is available from the Office of Technical Services, Washington 25, D. C., price 50 cents.

In these tests, wood panels were impregnated with compounds of known and unknown toxic qualities and exposed to attack by termites. Of the compounds tested, pentachlorophenol, copper and pentachlorophenate naphthenate, hexachlorophenol, zinc dithiocarbamate, creosote fortified with intermediate boiling fractions, creosote residue, and creosote minus tar bases were most effective in repelling termite attack. Impregnation was carried out by high pressure or immersion technique, with the level of impregnation varying from 0.8 to 5.0 percent and periods of exposure ranging from 22 to 30 months. The report gives detailed descriptions of methods of impregnating and testing, and tables rating the 37 compounds.

Monsanto Name Change

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Consumer Products Division is the new name of the unit formerly known as Merchandising Division of Monsanto Chemical Co., St. Louis, it was announced early this month by Roy L. Brandenburger, Monsanto vice-president and general manager of the division. Established in 1952 the division currently markets household products, garden products and wood finishes.

New Wilson Products

Three new cleaning products were introduced recently by Roy Wilson Manufacturing Co., Chicago, and are now being offered for exclusive distribution in several areas, under private label if desired. "Royal Cleaner" is a liquid concentrate fortified with syndets, de-

signed for use on soft type floors. "Red Glo" is a straight detergent liquid cleaner with a high active in-



Roy Wilson

gredients content. The third new product is a combination of wax and soap intended as a one-operation cleaner and stripper for soft type floors. Carried in stock for immediate shipment, these items come in various size containers. They will be drop-shipped to customers if so desired by the distributor.

Logcher P.I.C. President

Polarome International Corp., New York, has named Henri F. Logcher president, it was announced early this month. Dr. Logcher was export manager of Magnus, Mabee & Reynard, Inc., New York, prior to his recent appointment. Before joining MM&R he was connected with Home Products International, Ltd., New York.

Henri F. Logcher



Kinetic Aerosol News

The first issue of DuPont Aerosol News, house organ of the Kinetic Chemicals Division of E. I. du Pont de Nemours & Co., Wilmington, Del., was mailed recently. To be published quarterly, it is "dedicated to the expansion of the aerosol market", the first issue states. "The broad aim of Aerosol News", the publication says, "is to help sell more aerosol products through better merchandising and better products." News of developments by the Kinetic laboratory and plant and technical staff, information on market trends and market research, as well as news of new applications for "Freon" propellants made by Kinetic, will be covered in the new house organ. It will be distributed to aerosol marketers and loaders.

The first issue has articles on the DuPont survey of consumer preferences for aerosols, the firm's movie "The Spray's the Thing", purging as a means of removing air from aerosol cans, and the new "Freon" research laboratory and a new aerosol anti-tarnish formulation.

T. D. Johnson, Jr., manager of aerosol propellant sales for Kinetic, in announcing the new house organ, said it would be available to those interested in aerosols.

Form Tri-Cote Co.

C. W. Peters and E. L. Samuelson recently announced formation of Tri-Cote Co., Akron, Ohio. The company makes "Tridermis" skin protective cream and "Silk-O-Lene." Both men were formerly associated with Swift & Co., Chicago. The firm, formerly known as Tri-Dermis Co., operated under its former owners in Akron and in the territory east of Akron. The newly organized firm expects to operate on a national scale. Sales west of Chicago will be handled out of Des Moines by C. W. Peters; E. L. Samuelson will be in charge of sales east of Chicago with headquarters in Akron; operation of the Akron plant will be the responsibility of James White, Sr.

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SOAP and CHEMICAL SPECIALTIES

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| BUFFABILITY effortless, superb gloss | 1 | Waxes | Derived Waxes | Wax-like Plastics | DUROXON Waxe |
| ANTI-SLIP without tack, tough plasticity | | | | 1 | 1 |
| MELTING POINT 200°F and higher for superior protective properties | | | | V | / |
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Low Cost, too!

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HOUSEHOLD FLOOR WAX

A hard gloss, wax-rich, household-type, self-polishing finish featuring doublerich, deep, brilliant lustre and excellent wearing toughness. Won't discolor even the finest pastel-colored floors.

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An anti-slip, highly buffable, hard-wearing institutional and industrial selfpolishing emulsion featuring a clear film, superior initial gloss and excellent water resistance.

INDUSTRIAL FLOOR WAX-for problem floors

Industrial emulsion featuring complete elimination of any fatty acids. Leaves pure wax film with outstanding protective properties.

Your choice: DUROXON Wax

ASPHALT TILE PASTE WAX

A water resistant, anti-slip paste wax for asphalt tile floors, featuring low solids content, a mirror surface, consistency similar to solvent type formulations, yet contains no harmful solvents. Produces a tough, protective wax film that takes a high buffing gloss.

Your choice: DUROXON Wax

LIQUID PARQUET AND PATIO WAX

A liquid, solvent-type cleaner-wax for wooden, linoleum, and ceramic tile floors which will not settle-out on standing—will pour freely even in freezing weather. Its well-bodied white and translucent appearance will tell your customers that this is "something special."

Your choice: DUROXON Wax

FURNITURE AND LEATHER CREAM WAX

A snow-white, easy-to-spread, easy-to-buff furniture and leather cream. Gives a luxurious deep lustre worthy of the most costly surfaces.

Your choice: DUROXON Wax

AUTO WAX

A sparkling, easy to apply automobile polish of the wax-silicone-in-solvent type which dries without chalking. Gives automobiles that showroom appearance and keeps them that way!

Your choice: DUROXON Wax

SHOE POLISH

A shoe polish that will make even the proudest professional bootblack prouder of his work. This fine product will stay fresh longer—will not crumble and rattle in the can like ordinary shoe polishes. Features high resistance to summer temperatures and to sweating.

Your choice: DUROXON Wax

PASTE POLISH

A solvent type paste wax of low solids content featuring hard consistency and smooth, easy take-off. Buffs to a high shine. More economical to produce than ordinary paste polishes.

Your choice: DUROXON Wax

For details on any of these fine DUROXON WAX formulations, write your name and address and forward to:

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WAX FACTS

A monthly bulletin for news of waxes, formulations and new product ideas: Coupon will put you on the mailing list. It's FREE in the U.S., Canada, and Mexico.

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DUROXON C-60A - For emulsion pastes and creams

DUROXON R-11—For shoe and paste polishes
DUROXON R-21—For high solid liquid solvent
waxes

DUROXON E-321—For low solids liquid solvent waxes

Dura's research has developed and performance-tested these **DUROXON** formulations. They will save your laboratory

valuable hours of costly experimentation and will get you off to a fast start with the amazing —

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Profit like others have! Delight your customers with new and wonderful products. Write for formulations

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Warehouse stocks of Duroxon Waxes are carried in New York, Philadelphia, Los Angeles, Montreal, and Mexico City.

Aerosol Deodorant Insecticides

Combination quaternary ammonium compound and chlordane type insecticide aerosol spray product doubles as deodorant and insecticide

By Leo Trademan*

Velsicol Chemical Corp., Chicago

important factor contributing to the success of chlordane as a household and garden insecticide has been its extreme versatility. Chlordane is compatible with most solvents and propellants and can therefore be combined with a deodorant for residual type application. The product development section of Velsicol Chemical Corp. believes that a residual type pressure propelled spray containing chlordane as well as a deodorant will be of interest and value to the sanitation engineer, pest control operator and general

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Chlordane is applied by a residual type pressure propelled spray for control of insects such as flies, cockroaches, silver fish, spiders, centipedes, and ants. Because these pests are found in and around garbage containers, basements, outhouses, etc., it was necessary to give consideration to odor control. Many of the odors found in these areas are caused by organic matter decaying through the growth of a variety of microorganisms. Since quaternary ammonium compounds are efficient germicides as well as fungicides, their application would not only destroy the odors produced by micro-organisms but would also prevent a redevelopment of the odors. In addition, quats are true deodorants which rapidly destroy unpleasant odors without contributing an odor of their own; another advantage being that application by spraying is usually recommended.

A pressure propelled spray of this type is composed of the following: chlordane and knockdown agent, solvent, co-solvent, quaternary ammonium compound and propellant. Generally speaking, the majority of quaternaries are not entirely soluble in solvents used for chlordane formulations, and a co-solvent is, therefore, necessary. A number of co-solvents were considered in the light of commercial availability, price, toxicity, and mutual solvency for quaternary ammonium compound, chlordane and the propellant. Experimental formulations containing chlordane, knock-down agent, solvent, quaternary ammonium compound, and propellants were prepared with various co-solvents varying in concentration from 21/2 percent to 10 percent. These formulations were then placed in a cold room at 18° F., for a period of 72 hours. This procedure permits rapid evaluation of clarity and compatibility characteristics. Formulations which passed the cold test were then made up as pressure propelled sprays and put through a series of screening tests for shelf life, stability, and performance. The co-solvent found most successful under all of these tests was isopropyl alcohol.

At the same time, studies were conducted to determine suitable valves for the pressure propelled spray. It was found that valves used for low-pressure insecticide sprays having metering orifices in the range of .0135 inches to .016 inches gave the most satisfac-

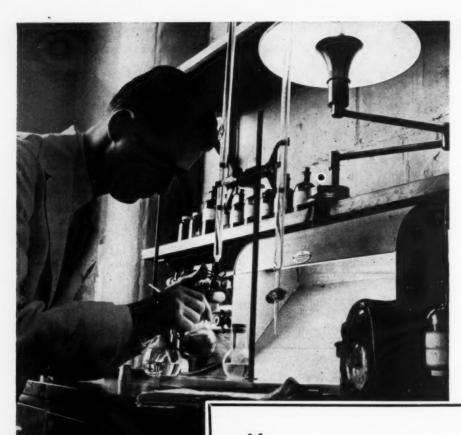
tory spray patterns when working at pressures of 20 pounds per square inch.

In addition, investigational studies were made on possible corrosive effects of these formulations on containers. Tests were conducted for a period of six months. At the end of the testing period, several of the pressure filled containers were pre-chilled and cut open, and all of the component parts were carefully examined. Valves used for insecticidal sprays showed no corrosion, and cans containing a phenolic type of resin as a liner showed no corrosion at the end of the testing period. At the same time, an accelerated test at a temperature of 120° F. for 30 days was also conducted. The pressure propelled residual sprays under test were checked for any loss in weight during storage, and in addition, they were tested for insect and odor control. No loss in effectiveness of the chlordane or of the deodorant was observed.

The final trial was a performance test accomplished with the cooperation of the technical staff of the Velsicol Chemical Corp. (which included personnel working with the problem, field men in various areas of the country), and a number of home owners. Instructions were supplied to each person who cooperated in the test program. The directions included proper spraying technique consisting of thoroughly dampening the surface of the test area. Areas covered were in and around garbage containers, basements, and outhouses.

(Turn to Page 171)

^{*}Paper presented at 42nd annual meeting C.S.M.A., New York, Dec. 7, 1956.



CHEMIST EMPLOYING HYDROXYLA-MINE HYDROCHLORIDE METHOD FOR DETERMINATION OF ALDEHYDES BY TITRATING WITH STANDARD-IZED ALKALINE SOLUTION.

MULTIPLY the operation pictured above by every lot of oils and aromatics that enter our plant and you get some notion of what it means to guarantee, unconditionally, the quality of our merchandise. Multiply this figure again by the half dozen or more different tests each lot is subjected to and you gain an additional idea of what such assurance involves. Then follow along adding to this the meticulous care that is practiced in our handling of an order from the time it is entered until it leaves our plant, expertly compounded, carefully checked, packaged, routed and shipped—usually the same day—and you just can't help saying to yourself: "No wonder FRITZSCHE" products never give me any cause for complaint!"

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News

Mulliken Joins CSMA

Alfred A. Mulliken has joined the staff of the Chemical Specialties Manufacturers Associa-



Alfred A. Mulliken

tion as assistant secretary, it was announced early this month. In this newly created post Mr. Mulliken will directly assist H. W. Hamilton, who serves as CSMA's secretary and managing director, a position he has held for the past 15 years. Mr. Mulliken comes to his new post from Creamery Package Manufacturing Co., with which he had been associated for the past seven years, most recently as sales engineer in its Philadelphia branch office.

Mr. Mulliken holds a bachelor of science degree from Massachusetts Institute of Technology (1932) and has done graduate work at the Boston University School of Business Administration. He was with United Shoe Machinery Corp., in Beverly, Mass., for 10 years and in 1942 he became budget director of International Minerals and Chemical Corp., Chicago. During the following six years he served as the firm's government plants finance manager.

New Aerosol Deodorant

A new pressure packed space deodorant designed for use in hospitals and institutions was placed on the market recently by James Varley & Sons, Inc., St. Louis, Mo. "Formula 88 Menthol Mist" contains a new odor neutralizer, camphor, menthol, and eucalyptus blended with triethylene glycol.

Continental Filling Data

A twelve-page illustrated booklet was published last month by Continental Filling Corp., Danville, Ill., describing all phases of the firm's aerosol packaging operation. Particular stress is laid upon quality control and checking devices and procedures of every type.

P. Val Kolb Dies

P. Val Kolb, 70, president of Sterwin Chemicals, Inc., subsidiary of Sterling Drug, Inc., New York, died in Rock Hill, S. C., Dec. 5. A native of Marietta, Ga., he started his business career with Tennessee Coal & Iron Works, Birmingham, Ala. Later he joined Swan Chemical Co., St. Louis, which took over Provident Chemical Works, of which he became president in 1931.

Mr. Kolb later joined American Agricultural Chemical Co., and, in 1940, he went with Sterwin. He was a member of the Drug, Chemical and Allied Trades Section of the New York Board of Trade and the American Pharmaceutical Manufacturers Assn.

During World War I Mr. Kolb was a special assistant to the

P. Val Kolb



Army Chief of Ordnance Production.

Blankmeyer Joins Arwell

The appointment of James V. Blankmeyer as staff sanitation consultant for the sanitation division of Arwell, Inc., Waukegan,



James V. Blankmeyer

Ill., sanitation consultants and general pest control firm, was announced recently by W. W. Scott, president. Previously, since 1951 Mr. Blankmeyer was sanitation engineer for Pabst Brewing Co., Peoria, Ill., where he directed plant sanitation programs for all Pabst divisions. Earlier he was senior consultant of Industrial Sanitation Counselors, Louisville, Ky., where he developed and directed plant sanitation programs for Seagram Distillers, the University of Louisville, Colonial Baking Co., and Pabst Brewing Co., divisions. A graduate of Kenyon College, Mr. Blankmeyer served with A. E. Staley Manufacturing Co., Decatur, Ill., as district sales manager before joining Industrial Sanitation Counselors.

New PICCO Warehouse

Pennsylvania Industrial Chemical Corp., Clairton, Pa., last month announced the opening of a new warehouse in Detroit, Mich. All warehouse activities in Detroit will be directed by the Detroit district sales office. The new warehouse is Jefferson Terminal, 1900 East Jefferson, Detroit 7.

Fairfield Appoints Wilson

Appointment of J. Ford Wilson as director of production of Fairfield Chemical Division of



I. Ford Wilson

Food Machinery and Chemical Corp., New York, was announced in December by Robert H. F. Dade, manager. The division's production facilities are located in Baltimore. Mr. Wilson was transferred to his new post from Jacksonville, Fla., where he served as plant superintendent for FMC's Niagara Chemical Division. Prior to that he was plant superintendent of Niagara's plant in New Orleans.

Johnson Advances Kivlin

Joseph T. Kivlin, Jr., has been advanced to the post of senior patent attorney in the research and development division, it was announced recently by S. C. Johnson & Son, Inc., Racine, Wis. Prior to his recent appointment he was as-

sistant patent attorney. In his new position he is responsible for securing and maintaining of patents for all company inventions. He has been with Johnson since 1953.

Millmaster Absorbs Smith

George F. Smith, Inc., George F. Smith Sales & Chemical Corp., and George F. Smith Export Corp., have been consolidated with Millmaster Chemical Corp., New York, and are now known as the George F. Smith Division, it was announced recently. George F. Smith has joined Millmaster as vice-president of the newly formed division according to a statement by Mr. Smith and Robert J. Milano, Millmaster president.

The executive and sales offices of Millmaster were moved at the same time to 295 Madison Avenue, New York 17, telephone MUrray Hill 9-1817.

Barr Starts Calif. Plant

Start of production at a new plant in Los Angeles was announced by G. Barr and Co., Chicago, last month. The new 20,000 square foot building, located at 850 E. 62nd St., houses equipment for refrigerated filling and pressure filling of aerosols and has a quality control laboratory. Barr now has plants in Chicago, New York and Los Angeles with a combined production capacity amounting to more than one million aerosol units a week.

New Barr, Los Angeles plant.

Horacek to Turco

Joseph Horacek, Jr., has joined Turco Products, Inc., Los Angeles, as assistant sales manager,



Joseph Horacek, Jr.

it was announced recently by S. G. Thornbury, president. In addition to general overall sales responsibilities Mr. Horacek will specialize in sales personnel, sales training, and new product development.

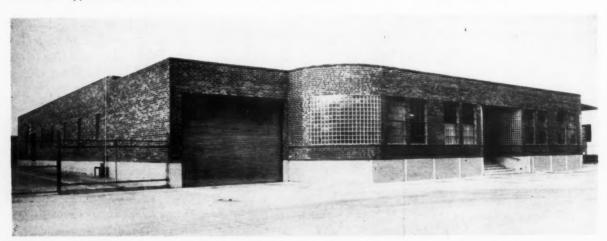
Mr. Horacek comes to Turco after seventeen years with Hercules Powder Co., Wilmington, Del., where he was most recently in charge of West Coast sales for industrial chemicals, paper makers chemical department.

BIMS Annual Dinner

BIMS of New York will hold their annual dinner at Toots Shor Restaurant, New York, Thursday, February 16. Entertainment will consist of a show arranged for by Douglas Haggerty.

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Robert S. Whiteside

New Sterwin Executives

Election of Robert S. White-side as president of Sterwin Chemicals, Inc., New York, subsidiary of Sterling Drug, Inc., was announced early this month by J. Mark Hiebert, president of the parent corporation. Mr. Whiteside succeeds the late P. Val Kolb, who died in December.

Two vice-presidents were appointed at the same time: Reginald C. Sherwood becomes vice-president and technical director and William X. Clark vice-president in charge of sales.

Prior to his election as president, Mr. Whiteside had been vice-president. He joined the organization in 1941 as technical director of Sterwin Chemicals, subsequently became assistant to the president and in 1952 was named vice-president. Before going with Sterwin he was a chemist with Rodney Milling Co., Kansas City, and with Kroger Co., Cincinnati, and chief chemist with Schultz-Baujan Mills, Beardstown, Ill.

Dr. Sherwood joined Sterwin Chemicals in 1946 as technical director. During World War II he was assistant chief, Civilian Food Requirements Branch, War Foods Administration. From 1929 to 1943 he was associated with General Mills, Inc., Minneapolis, as divisional vice-president and general manager of research laboratories. He was assistant professor of chemistry at Montana State College and assistant professor of agricul-



Reginald C. Sherwood

tural biochemistry at the University of Minnesota.

The new vice-president in charge of sales, William X. Clark, joined Sterling in 1941 and was named assistant sales manager the following year, sales manager in 1948.

Two Velsicol Appointments

F. E. Richardson has been appointed assistant manager of the Memphis plant of Velsicol Corp., Chicago, it was announced last month. With Velsicol since 1948, Mr. Richardson was chief engineer at Memphis prior to his recent advancement.

The appointment of James D. Merrill to Velsicol's advertising staff was announced at the same time by L. E. Carls, advertising manager. He was previously associated with Stewart-Warner Corp.

F. E. Richardson





William X. Clark

Cato Names New Rep.

Don M. Finrow has been appointed as representative in the western states for Cato Chemical Co., Elmhurst, Ill., it was announced recently by Jacob Broncato, president of Cato. Mr. Finrow, who is president of Betlen Corp., 3753 Brooklyn Ave., Seattle 5, Wash., will act as billing agent for Cato waxes and finishes on the west coast.

Tilbury Changes Name

Tilbury Refining Corp., Brooklyn, N. Y., has acquired 100 percent of the stock of Wax Corporation of America, it was announced recently. The combined organizations will be known as Wax Corp. of America. Officers are: Gilbert J. Tilbury, president; M. L. Tilbury, vice president: and Gilda Mattera, secretary.

James D. Merrill



Quality Tested

For no-rub waxes with greater shelf-stability

gloss scuff resistance plus durability leveling anti-slip

Refined white shellac

Leading manufacturers of water emulsion waxes and polishes have adopted Mantrose shellac because of its high quality, uniformity and stability.

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Importers · Bleachers · Manufacturers

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Agents and warehouse stocks in principal cities:

Allied Basic Chemical Co. Montreal 24, Canada Allied Basic Chemical Co. Toronto 12, Canada J. A. Castro Havana, Cuba C. M. Durbin Company

Cincinnati, Ohio

Grant Chemical Co. Boston, Mass. J. H. Hinz Company Cleveland 13, Ohio Harry Holland & Son, Inc. Chicago 6, Ill. R. L. Kelley Danbury, Conn.

J. G. Roger Chemical Co., Inc. Baltimore 23, Md. H. C. Ross Burbank, Cal. E. M. Walls Company San Francisco, Cal.

JA

Buys Bareco Wax Business

The purchase of the wax business of Bareco Oil Co., Tulsa, Okla., by Petrolite Corp., Kilgore,





B. H. Clary

R. F. Scivally

Texas, effective Dec. 1, was announced recently. The transaction has been confirmed by stockholders of both companies.

The operations of the two companies and their facilities will be combined and will do business as Bareco Wax Co., a division of Petrolite Corp. Both the Bareco refinery at Barnsdall, Okla., and the Petrolite refinery at Kilgore, Texas, will continue to operate, producing the full line of Bareco and Petrolite waxes. Sales will be under the supervision of B. H. Clary, with offices at Tulsa, Okla. District sales offices will be maintained at New York, Philadelphia and Chicago. General operations will be under the supervision of R. F. Scivally, vice-president and general manager, with offices at Kilgore, Texas.

Witco Shifts Execs.

Max A. Minnig last month was elected president of Witco Chemical Co., New York. He succeeds Robert I. Wishnick, who becomes chairman of the board and chief executive officer. William Wishnick succeeds Mr. Minnig as executive vice president.

Mr. Minnig joined Witco in 1946, was elected vice-president in 1950 and executive vice-president in 1953.

Robert I. Wishnick, founder of Witco, has been its sole president. Under his direction the 35 year old firm has grown from a distributor of chemicals to a concern serving the industry with chemicals manufactured in 14 owned

or affiliated plants in the United States and abroad.

The newly elected executive vice-president, William Wishnick, joined the firm in 1942 at the Lawrenceville plant. He served in the Air Corps during World War II and later became acquainted with Witco manufacturing and sales operations. Subsequently he joined the executive offices in New York and became treasurer in 1951, a vice-president in 1953.

CSC Shifts Tislow

Marion E. Tislow has been assigned to the market development department of Commercial Solvents Corp., New York, it was announced late in December by Frank E. Dolian, manager of the department. Mr. Tislow's new assignment is with the technical service section of Terre Haute, Ind. With CSC since 1951, he was most recently a production supervisor in the bacitracin plant.



Puritan Expands Plant

Plans for a new, half-million dollar manufacturing and storage plant were announced recently by Puritan Chemical Co., Atlanta. The new unit, the first segment of which is to be completed in the fall of 1956, will add 65,000 square feet of floor space to Puritan's present plant of 100,000 square feet, according to Ted V. Fischer and William H. Frey, Puritan executives.

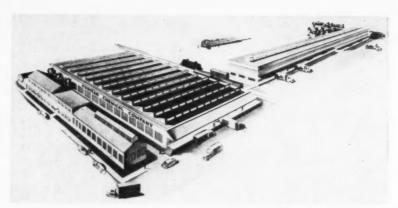
The new building will have two stories and a subground working level. Each story will have a removable section of flooring to allow for easy installation and removal of equipment. In addition, the completely modern plant will feature an overhead bridge crane, electronic communication system, a 200 feet long shipping dock with adjustable dockboards, a new quality control laboratory, maintenance shop and an employee lunch and recreation area.

In the last five years the company has experienced an increase of 180 percent in sales and an 80 percent increase in the number of its salesmen. Puritan's principal marketing areas are located in the southeast, southwest, midwest and middle Atlantic regions of the U. S.

Aerosol Pressure Tester

Builders Sheet Metal Works, Inc., New York, has developed a new piercing type apparatus for checking the internal pressures of aerosols. According to a recent announcement by William Scheck, vice-president of Builders, the testing device was built from specifications supplied by the Chemical Specialties Manufacturers Association subcommittee on pressure determination.

The aerosol can to be tested is clamped into the apparatus upside down for normal bottom piercing. While valve piercing is possible, bottom piercing is preferred. After being clamped in place, a top section, consisting of the piercing piece, three valves and a pressure gauge, is placed over the can. This is



Artist's conception of new addition (upper right) to the plant of Puritan Chemical Co., Atlanta. One segment will be completed this fall.

screwed down until the bottom of the can is punctured. The side valve, which leads to a vacuum apparatus, and the top valve to the gauge are opened and approximately a 20 inch vacuum is pulled. The side valve is closed, the vacuum hose disconnected and a nitrogen hose connected. The valve assembly is then prepressurized to within two or three pounds of the expected pressure within the can. Nitrogen is used in this operation because of its inert properties. Prepressurizing prevents the product from being forced into the valve assembly and clogging it. The third valve located at the piercer is next opened and the pressure reading taken. The can can be inserted in a water bath up to 130°F for testing at maximum pressure.

Williams to Black Leaf

George R. Williams has joined Diamond Black Leaf Co., Cleveland, as sales and service representative, it was announced last month by J. M. Merritt, sales manager. In his new position Mr. Williams covers the entire state of Ohio and assists retailers in promoting the use of "Black Leaf" pesticides by home gardeners. Prior to his new appointment Mr. Williams represented H. D. Hudson Manufacturing Co., Chicago, producers of sprayers and application equipment, Before joining Hudson in 1950 he was associated with Swift & Co., for two years.

CSMA Buyers' Guide

The first edition of "Vendors to the Trade" is now available from the Chemical Specialties Manufacturers Association, Inc., 50 E. 41st St., New York. The 52-page booklet lists about 160 member companies, their addresses, telephone numbers, the product groups they make or handle, and the services they render. An alphabetic cross index is appended, CSMA proposes to issue this book annually. Only members desiring listings are included and each company listed has contributed to the cost of production.

Mac-Lac Moves Offices

Mac-Lac Co., New York importers, bleachers and manufacturers of shellac, moved its executive offices, Dec. 29, to 33 Rector St., it was announced by Henry E. Blanchford, secretary. The fifty year old firm has left its Maiden Lane address and taken the 11th floor of 33 Rector Street, New York 6, for its executive offices. The telephone number is WHitehall 3-5230. Mac-Lac's shellac bleaching and refining plant is located in Rahway, N. J.

Diversey Extra Dividend

Diversey Corp., Chicago, in December, declared a quarterly dividend of 20 cents a common share, an extra dividend of 20 cents a share, and a two percent stock dividend, all payable Jan. 5, to stockholders of record Dec. 20.

New Hysan Catalog

Hysan Products Co., Chicago, announced last month publication of a new colored and illustrated 64-page catalog. Separate sections are devoted to aerosols, floor products, deodorants and deodorant blocks, disinfectants, insecticides, detergents and cleaning compounds, polishes, soaps and soap dispensing equipment. The catalog and a new price list are available to recognized distributors.

SAACI 1956 Slate

The following slate of officers for 1956 has been presented by the nominating committee of the Salesmen's Association of the American Chemical Industry, it was announced recently:

President, E. L. Collins of Chilean Nitrate Sales Corp., New York; vice-president, Vincent L. Rebak, Grace Chemical Co., New York: treasurer, Robert I. Roberts. of the New York Office of Emery Industries, Inc., Cincinnati; directors, Joseph R. Augello, Washine-National Sands, Inc., Long Island City, N. Y.; Charles E. Griffith, R. W. Greeff & Co., New York; Lester Johnson, International Nickel Co., New York; W. Gilbert Kayser, Jr., Sharples Chemicals, Inc., Philadelphia, and Herman M. Schulman, Washine-National Sands, Inc., Long Island City, N. Y.

Complete Insect Control

New insecticides; aerosol generators capable of producing an insecticidal cloud that can be drifte! across entire cities or swamps; new ways of fumigation; better biological control through natural enemies of harmful insects; and development of insect-resistant crops will be the weapons in a coordinated attack on insect pests, according to George W. Irving, Jr., deputy administrator for research, Agricultural Research Service of U.S. D.A. Dr. Irving spoke at the third annual meeting of the Entomological Society of America held recently in Cincinnati. With rising standards of living and increasing knowledge, Dr. Irving said, 100

percent control of insect pests will be demanded by the public.

"Tamed Iodine" Mark

The registered trade mark "Tamed Iodine" has been issued to West Disinfecting Co., Long Island City, N.Y., under date of Nov. 1, 1955, and carries the U. S. registration number 615,063, it was announced last month. West is currently using the mark on the following products: "Wescodyne", "Westamine X", "Showersan", all products of West Disinfecting Co., and on "Iosan" and "Iobac" of West's Lazarus Division; and on "Kleenodyne" of West Laboratories Division.

New Cate Literature

Cato Chemical Co., Elm-hurst, Ill., recently issued a bulletin on its new non-skid plasticizer for use in floor waxes. A 100 percent wax emulsion, the new non-skid agent is manufactured with 24 percent solids and is said to be compatible with any formulation. Prices on the plasticizer are: \$1.86 per gallon in 55 gallon drums, \$1.95 per gallon in 30 gallon drums and \$2.00 per gallon in five gallon pails. Copies of the bulletin may be obtained on request to Cato Chemical Co., Elmhurst, Ill.

Kills 'Em Changes Name

The name of Kills 'Em Chemical Co., Ltd., Honolulu, Hawaii, subsidiary of Diversey Corp., Chicago, was changed Dec. 1 to Diversey Corp. (Hawaii), Ltd. The change in name was announced by F. O. Spence, who continues as president of the Hawaii corporation. Kills 'Em Chemical Co., became a wholly owned subsidiary of Diversey in 1953 and under its new name will continue to manufacture such products as "Pine-O" and "Kill Dane." The firm will also continue to operate and increase the services of the termite and pest control department of the company. Also being manufactured by Diversey in Hawaii are "Diversol," "Diverside," "Tig," "Dilac," "Spec-Tak," and other sanitation chemical products.

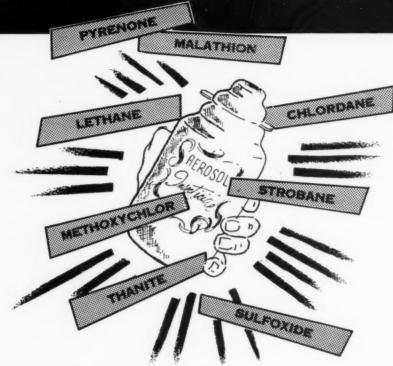
Hoffmeister in New Pest

George Hoffmeister has been appointed by Boxer Manufacturing Corp., St. Louis, Mo., to represent the firm in Texas, Louisiana, Arkansas, Oklahoma, and New Mexico, it was announced recently. Boxer manufactures a line of equipment for dispensing sanitary chemicals. Prior to joining the St. Louis firm, Mr. Hoffmeister represented Federal Varnish Division, Chicago.

Edward W. Gorham of Biscayne Chemical Laboratories, Miami, left, congratulates Luis de Hoyos of Synfleur Scientific Laboratories, Inc., Monticello, N. Y., on winning the 1955 angling championship of the Miami Beach Rod and Reel Club. Mr. Gorham was winner of the 1954 award presented by the club which is considered the world's outstanding fishing group.



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D&O Aerosol Department offers, under the direction of experienced perfumers and aerosol technicians. Whether your aerosol insecticide contains MALA-THION, LETHANE, PYRENONE, CHLORDANE, SULFOXIDE, THANITE, METHOXYCHLOR, STROBANE, or any one of the other popular active ingredients . . . the D&O Industrial Odorant and Aerosol Testing Laboratories can provide performance tested masking agents, tailored both to your product and price range. Consult D&O.

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Curlett McCormick Pres.

The election of John N. Curlett as president of McCormick & Co., Baltimore, was announced



John N. Curlett

late last month by Charles P. Mc-Cormick, chairman of the board, who is succeeded by Mr. Curlett. Mr. Curlett joined McCormick in 1930 and was elected to the board in 1935. A year later he was named vice-president of the company and in 1950 was appointed to the position of executive vice-president. He has also served as president of the western division of McCormick. Mr. Curlett is a former president of the Chemical Specialties Manufacturers Assn., a former president and member of the board of governors of the Flavoring Extract Manufacturers Association of the U.S., and a former executive director of the Food Industry War Committee. Currently he is a director of the

T. Carter Parkinson



Grocery Manufacturers' of America.

T. Carter Parkinson, sales promotion manager of McCormick, has been appointed director of sales, consumer products division and elected to the board of directors of the company. He joined McCormick as a salesman in 1946 and since that time has been assistant to the vice-president, assistant sales manager southern zone, sales manager, insecticide division, sales man-

ager Atlantic division and sales promotion manager. He is a former vice-president of the Chemical Specialties Manufacturers Association.

ESA Meeting Feb. 20-21

The fourth annual meeting of the southwestern branch of the Entomological Society of America will be held at the Hotel Texas, Fort Worth, Tex., Feb. 20-21. Chairman of the committee on ar-



Du Pont Methoxychlor [90% technical methoxychlor oil concentrate]

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Insecticide knocks down flies as well as formulation costs

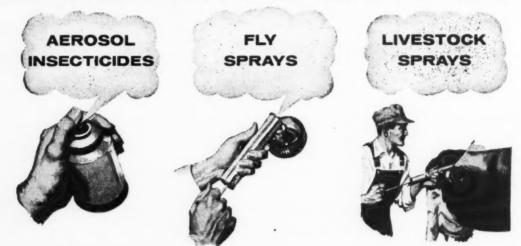
Tests show how economical methoxychlor can be the backbone of any spray.

| | | | ESTIMATED % FLIES ON FLOOR | | | | |
|-------|--------------|--------|----------------------------|--------|--------|----------|-----------|
| | | 2 Min. | 4 Min. | 6 Min. | 8 Min. | 10 Min.* | 24 Hours* |
| 0.25% | methoxychlor | 3 | 36 | 75 | 90 | 29 | 38 |
| 0.50% | ** | 6 | 50 | 88 | 93 | 96 | 63 |
| 0.75% | ** | 9 | 61 | 93 | 97 | 98 | 79 |
| 1.00% | | 16 | 71 | 95 | 97 | 99 | 85 |

Methoxychlor is readily available. At 1% strength, it costs less than 8¢ per gallon of spray.

*Figures from standard Peet-Grady tests of methoxychlor space sprays

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rangements is Hugh Swink of the Dallas, Tex., office of Pittsburgh Agricultural Chemicals.

Karlsruher to Black

Charles D. Karlsruher has joined the executive staff of George Black Co., Union, N.J., industrial public relations and management counsel. Mr. Karlsruher was previously associated with Sharples Chemicals Inc., Philadelphia, as advertising manager and with Pennsylvania Salt Manufacturing Co., Philadelphia, as assistant advertising manager.

Geigy Reorganizes

Operational changes in organization and sales policy of Geigy Agricultural Chemicals, Division of Geigy Chemical Corp., New York, were announced early this month by George R. Ferguson, president of the division. The firm will concentrate on manufacture and sale of basic products and formulations stemming from its own research program. It will continue to make DDT and methoxychlor and to sell these basic products to formulators and will also continue to manufacture and market DDT and methoxychlor insecticides.

Geigy sold its Des Moines. Iowa, formulating plant to Diamond Alkali Co., Cleveland, on Dec. 1. Formulating plants located at Elkton, Md., Leland, Miss., Fresno, Calif., and warehouses at Holton and Presque Isle, Me., Orlando, Fla., and Walla Walla, Wash., were taken over by Olin Mathieson Corp., New York, on Dec. 19.

The firm's "Diazinon" formulations are now recommended for use against flies in dairy barns and "Chlorobenzilate" miticides were introduced recently and have proved successful in fruit growing areas.

Products will be manufactured and formulated at Geigy plants in Cranston, R. I. and Mc-Intosh, Ala., and will be distributed through the firm's warehouses.

Saul LeVasseur, former sales manager of the northeastern territory, has been named sales



C. D. Fischer (left) and M. J. Siciliano were named recently to new posts in the Crag Agricultural Chemicals Division of Carbide and Carbon Chemicals Co., a division of Union Carbide and Carbon Corp., New York. Mr. Fischer was appointed assistant to the manager of the division and Mr. Siciliano was named product manager in charge of sales.

manager of branded products and John G. Plowden continues as sales manager of technical DDT and DDT formulations.

Field representatives are: Glen B. Armstrong, Wilmington, Del.; George W. Hamilton, Columbus, Ohio; Larry W. Harman, Walla Walla, Wash.; Calvin A. Hoadley, Camillus, N. Y.; E. L. Jarrett, Jr., Waco, Texas; E. L. Jarrett, Sr., Leland, Miss.; Fitzhugh Lee, Aberdeen, N. C.; Lester G. Ohle, Denver, Colo.; Haskell Tison, Geneva, Ill.; and Charles L. Turzan, Fresno, Calif.

New Source of Iodine

A concentrated "source of iodine" combined with non-ionic surface active agents and phosphate salts was introduced in December by Onyx Oil & Chemical Co., Jersey City, N. J. "Idonyx" was designed for the formulator of iodine germicides of the iodophor type in either powder or liquid form. The material is a fine, freeflowing powder, said to be nonirritating and non-corrosive and to have good storage stability. At the same time Onyx introduced two non-ionics for use with "Idonyx": "Neutronyx 640" for compounding liquid iodophors and "Neutronyx PX" for powdered products. Suggested formulas, samples, and use information are available from

The non-ionic in iodophor formulations serves a dual purpose: it acts as a solubilizer for the iodine in water and as a detergent. Such formulations may therefore be regarded as single operation detergent sanitizers, and may be applied as such where permissible.

The self-indication of germicidal strength is a convenient feature of "Idonyx" formulations. Iodine in solution, which is the active germicidal principle, is indicated by an amber color. As it is exhausted the color fades and eventually disappears. Hard water does not affect efficiency.

New Trio Literature

Trio Chemical Works, Inc., Brooklyn, N.Y., recently announced a new four page folder on its line of floor waxes. It is the first in a series of five bulletins on Trio products. Future folders will be published on the firm's disinfectants and deodorants; soaps; polishes and cleaners; and insecticides. More than a dozen floor waxes are described in the new bulletin, copies of which are available on request to Trio Chemical Works, Inc., 341 Scholes St., Brooklyn 6, New York.

Fritzsche Moves Branch

Fritzsche Brothers, Inc., New York, recently moved its Boston office from the Statler Building to 661 Washington St., Norwood, Mass. Refiners of
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Ziegler Expands Units

Additional facilities being built at two of its plants are nearing completion, it was announced recently by G. S. Ziegler, general manager of G. S. Ziegler & Co., New York. The addition to the manufacturing and warehouse building for increased production of the new Cornelius Wax Refining Division at New Market, N. J., will be finished early in 1956. Also included in this expansion is new and enlarged office space.

The Gilsonite processing and packing plant at Provo, U., is currently being enlarged and equipped with automatic packing machinery. A new and separate office building has already been completed at this location.

Bobrick Catalog Sheet

A revised salesmen's descriptive catalog sheet was issued recently by Bobrick Dispensers, Inc., Los Angeles. Condensed data, illustrations, and suggested retail prices are included in this punched sheet, which is designed for insertion in salesmen's books. The name "Bobrick" is no longer displayed in a prominent place, so that the sheets may be issued by distributors.

Detergent Spotting Agents

(From Page 43)

the use of the spotting agent to shirts, blouses, lingerie, and similar garments. We emphasized that particular attention should be given to collars and cuffs.

Our instructions for home use were very simple. We indicated that, prior to washing in the usual manner, the spotting agent should be applied to the soiled area and then rubbed or flexed thoroughly. The treated garments were then to be placed in the machine with the rest of the wash load.

Results of this limited survey were convincing: performance was rated excellent, and reports showed that no inconvenience was attached to pretreating the garments. Package preference favored the aerosol and polyethylene containers. However, it is believed that the tube containers issued were too small, and that a larger tube would be equally acceptable.

A frequent question concerned the safety of the product. We advised that the pure liquid "Renex" 20 was non-toxic, non irritating to the skin, non-flam mable, and thus presents no hazard in the home under the conditions of use described.

In addition to its use on wearing apparel, we visualize many other applications for this spotting agent in the home. In the normal course of use other household fabrics such as rugs, upholstery blankets, sheets, draperies, bed spreads, and curtains accumulate soil, the nature of which is ofter oily and greasy. Such a spotting agent would be indicated where such heavy soil is confined to a limited area, and the fabric is wash-

Many individuals who trave! extensively prefer fabrics which may be "washed-and-worn." We suggest a small container of the surfactant type spotting agent, as a valuable addition to their travelling kit. This product should also be of interest to drycleaners for use on their "spotting" tables.

Summary

X this paper we have described a fundamentally different technique for applying detergents and further indicated that certain classes of surfactants are especially effective when used with this technique. Undoubtedly, further research will bring forth compositions which are superior either from the point of view of effectiveness or from combining the several actions normally found in household detergents. We believe that there is room for further fruitful research on compounding and packaging such materials.

References

- 1. R. E. Wagg, J. Tex. Inst., 1952,
- 2. H. E. Stanley and M. D. Padusis paper given to the Fiber Society, Sept., 1953 (unpublished).



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(Turn to Page 169)

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(Continued on Page 171)

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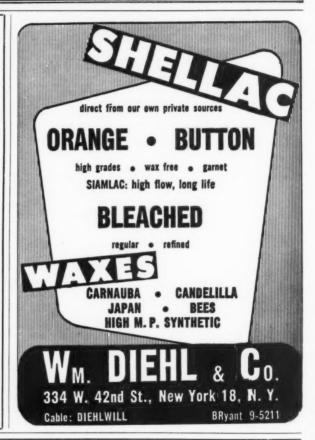
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For Sale

For Sale: Small insecticide company. One of oldest and most respected names on West Coast. Opportunity for merchandiser to expand territory and items. Address Box 582, c/o Soap.

Distributorship: Canadian distributor of sanitary products is open to take on exclusive distributorship for American manufacturer. Present set-up includes 21 salesmen and 37 jobbers covering all of Canada for sanitary supplies and equipment sold to factories and institutions. Well established firm, 20 years in business. Send full details of proposition to F. T. Van Nest, Ontario Chemical Co., Ltd., 51 Clarkson Ave., Toronto 10, Ont., Canada.

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Standard Reference Books:

See Page 174



To sample its line of maintenance products in the home, U. S. Sanitary Specialties Corp., Chicago, uses this attractive package for Christmas gifts and yearround promotional good-will getters. Packed in aluminum bucket are detergent, floor cleaner, floor wax, hand cleaner, etc.

FMC Appoints Four

Food Machinery and Chemical Corp., New York, recently announced four appointments to the staff of the newly organized central development department of the chemical divisions: Lloyd G. Mount, formerly in charge of research with Chemstrand Corp., Decatur, Ala., and previous'y associated with American Cvanamid Co., New York; Julius B. Olin, formerly of the University of Washington; Jerry J. Sherwood, associated with Jefferson Chemical Co. and American Cyanamid Co. both New York, and Richard M. McFarland, previously with Brea Chemicals Corp., Los Angeles.

Insecticide Deodorant

(From Page 14)

Everyone taking part in the test program was asked to fill out a questionnaire covering the effectiveness of the spray for a period of 24, 48 hours, seven days and 14 days. In every case, good insect and odor control was obtained.

An example of a formulation which was developed by our laboratories is given below:

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(99% grade) 0.115% Technical Piperonyl

Butoxide

0.046% Pyrethrins 67.49% Deodorized Kerosene

25.00% Freon #12

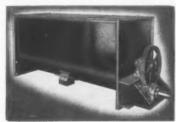
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New York 1, N. Y.

E. H. Jones Dies

Evan H. Jones, former president and director of Apothecaries Hall Co., Waterbury, Conn., died Nov. 19.

Waterless Hand Cleaner

(From Page 44)

in jet engine construction. Tests were run for six weeks on hands of 18 laboratory workers and it was found that all the cleaners did produce a residue on hands after use. However, no metals they handled showed any corrosion and no corrosion had appeared in these metals three months later.

For testing mildness a method similar to the patch test for soap was used. Three of the 15 products were found non-irritating but the other 12 caused irritations ranging from mild to profound. Cleaners without solvents were less irritating than those containing solvents. Those with ammonia or alkaline salts were most irritating. This, Dr. Birmingham cautioned, does not mean that the irritations will occur in actual practical use.

In the tests for defatting capacity, 20 laboratory volunteers used the cleaners daily for seven weeks. No demonstrable effect was shown on the skin, although the products containing ammonia or alkaline salts appeared to be more severe.

Following the laboratory investigations, field usage tests of the 15 waterless cleaners and four conventional cleaners were conducted on 500 persons. Two cleaners produced less scaling and increased skin smoothness than did the others. One of the most irritating cleaners showed marked scaling. Those with high alkalinity showed the most adverse reactions during summer months. The majority were satisfactory in their cleaning ability but deposited loose soil around finger nails, which required extra effort to remove.

Users complained of residual odors on hands and the sticky, oily feeling that remained after use. A photographer could not use them

because the residues contaminated his chemicals. A linotype operator said they made his fingers feel "slippery" so he could not operate his keyboard properly. Typists complained of grease marks made on the stationery they handled. Laboratory workers spoke of the grease marks on laboratory glass-

It was plainly evident, Dr. Birmingham summed up, that waterless hand cleaners differed in their performance. He emphasized, however, that they do have practical application for selective usage and that they do satisfy certain needs for quick, effective soil removal, better than the more conventional cleaners.

Wax Formulation Trends

(From Page 133)

- 4. Marsel, C. J., Soap and Chemical Specialties, Feb., 1955.
- Pamphlet, Semet-Solvay Petrochemical Div. of Allied Chemical & Dye Corp.
- 6. Pamphlet, American Cyanamid Co.
- 7. Wax Facts, Vol. 1, No. 2, June, 1955, Dura Commodities Corp.
- L. H. Perry, R. S. Sweet, Proceedings, The 40th Mid-Year Meeting of CSMA, p. 128 May, 1954.
- 9. Wierich, C. L., Modern Sanitation, p. 24, Sept., 1955.

Suppliers of Wax Raw Materials

AC Polyethylene—Allied Chemical & Dye Corp., Semet-Solvay Petrochemical Division, New York.

Amberol Resins-Rohm & Haas Co., Philadelphia.

Darex Latices—Dewey & Almy Chemical Co., Cambridge, Mass.

Duroxon, FT Waxes—Dura Commodities Corp., New York.

Durez Resins—Durez Plastics and Chemicals, Inc., Tonawanda, N. Y.

Elvalan Vinyl Polymer—E. I. du Pont de Nemours & Co., Wilmington, Del. Geon Latices—B. F. Goodrich Chemical Co., Cleveland, Ohio.

Loba C. Resin—William H. Scheel, Inc., Brooklyn, N. Y.

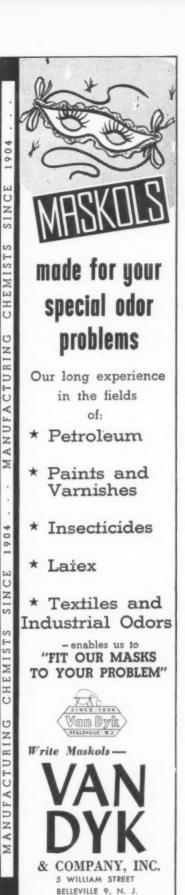
3 - Methoxypropylamine — American Cyanamid Co., New York.

Piccopale Resins—Pennsylvania Industrial Chemical Corp., Clairton, Pa.

Pliolite Latices—Goodyear Tire & Rubber Co., Chemical Division, Akron, Ohio.

Rhoplex Latices—Rohm & Haas Co., Philadelphia.

Vinac Polymers—Colton Chemical Co., Cleveland.



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3. MODERN CHEMICAL SPECIALTIES

(514 pages)
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Coming Meetings

American Oil Chemists' Society, 47th annual spring meeting, Shamrock Hotel, Houston, Texas, April 23-25.

American Society of Perfumers, symposium: Premarket Testing of Fragrances, Essex House, New York, afternoon of March 21.

Association of American Soap & Glycerine Producers, Inc., 29th annual meeting, Waldorf-Astoria Hotel, New York, Jan. 25-27.

Chemical Market Research Association, Webster Hall, Pittsburgh, Pa., Jan. 31 and Feb. 1.

Chemical Specialties Manufacturers Association, 42nd midyear meeting, Drake Hotel, Chicago, May 20-22.

Entomological Society of America, southwestern branch, fourth annual meeting, Hotel Texas, Fort Worth, Feb. 20-21.

Folding Paper Box Association of America, San Francisco, March 10-12.

National Association of Retail Grocers, Los Angeles, June 10-14, 1956.

National Packaging Exposition of the American Management Association, Convention Hall, Atlantic City, N. J., Apr. 9-12.

National Premium Buyers Exposition, Navy Pier, Chicago, March 19-22.

National Pest Control Association, regional conferences, University of Massachusetts, Amherst. Mass., Feb. 2-4; Purdue University, Lafayette, Ind., Jan. 30-Feb. 3; Louisiana State University, Baton Rouge, Jan. 30-Feb. 1.

National Sanitary Supply Assn., 33rd annual convention and trade show, Conrad Hilton Hotel, Chicago, Apr. 29, 30 and May 1-2.

Plant Maintenance Show, Convention Hall, Philadelphia, Jan. 23-26.

Society of Cosmetic Chemists, semi-annual meeting, Biltmore Hotel, New York, May 18.

Synthetic Organic Chemical Manufacturers Association, monthly luncheon meetings, Roosevelt Hotel, New York, Feb. 7, March 13, April 12, outing at Skytop, Pa., May 16-18.

Toilet Goods Association, annual meeting, Waldorf-Astoria Hotel, New York, May 15-17.

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Eale Ends

OME January 25 and the soap and allied industries will assemble at the Waldorf in N. Y. Fat soapers, skinny soapers, big soapers and little ones, all meeting under the auspices of the Soap Association. There will be a fatty acid and glycerine conclave as well. For the first time in the Association's thirty year history, the big free-loading cocktail party run by one of the general magazines, following the Maid of Cotton Show, will be conspicuous by its absence. On that evening, gentle reader, you buy your own drinks!

Statistic: 532 blokes lined up to have their picture taken with Miss America in the suite of Fuld Chemical during the open house shindig at the recent CSMA conclave in N. Y. The line of males waiting to be photographed extended out of the suite and away down the hallway. Statistics also show that 482 of those photographed will not show the pictures to their wives. The rest are bachelors.

Square moth balls, no less. Comb that one out of your whiskers, you moth control experts. It seems that square moth balls would stay put while the round kind roll all over the place and get stepped on. Anyway, a bloke by the name of Leslie Hardern who runs a program for inventors for BBC in London, came up with the idea recently and it is reputed to have struck a note of accord among his listeners. So now, he's got the moth ball fellows on the defensive. Why are moth balls round?

Mel Fuld of Fuld Brothers, Baltimore, retired as president of the Chemical Specialties Mfrs. Assn. last month after serving two terms. On his last day in office as prez while attending the CSMA meeting in N. Y., he received the following telegram from his brother, Joe, invalided at home as the result of an accident on the train while traveling to the West Coast to the NSSA regional meeting: "Hear you are out of a job. Before seeking employment elsewhere, we suggest you contact our personnel department."

One of our largest chemical companies is reputed only to hire salesmen who are six feet tall or taller. This is something of a new policy, we judge, because we know some of their older men are not six footers. But if the idea spreads, it poses a problem for the runts who might like to go into selling. And it so happens that one of the best producing salesmen we have ever known is a little bloke about five foot one who probably does not weigh more than 110 lbs. soaking wet. Sure, big men are supposed to be more impressive, command more attention. But, in our book, the

stuff under the man's skull is more important than size.

The only soap company in the U. S. with the nozzle of their fire hose painted a beautiful "cosmetic pink"! That's the distinction of the Hewitt Soap Co., at its New York office. Said Leonard Schultes of Hewitt recently when the pink hose nozzle was called to his attention: "I've been passing that pink thing for the past year and never noticed it. Now, it'll worry me every time I walk by it."

Pictures, pictures, all over the place! Combined with the Aerosol Package Contest exhibit at the recent CSMA meeting, 45 oil paintings and water colors adorned the walls of the display room, all the work of Mike Lemmermeyer, prez of Aromatic Products, Inc. Now, Mike is an artist of note who started his painting in France during World War I while an artilleryman in the U. S. Army. He has done many fine portraits of chemical people. At the CSMA board meeting, Mike

surprised Mel Fuld, retiring prez, by presenting Mel with his (Mel's) portrait, a reproduction of Mel's pix on a front cover of SOAP.

Fred Lodes, Squire of Yonkers and head of Precision Valve, wears a pair of cuff links which are probably the most novel thing of their kind extant. To each link is attached a miniature aerosol valve. In making the presentation of the winning aerosol package awards for 1955 at the recent CSMA meeting, Fred wore these very appropriate cuff links and they attracted considerable attention.

Ruth Farnworth, advertising manager of Dodge & Olcott, Inc., New York, was married to Bill Kitchen, a New York communications consultant, Dec. 10. To add to the excitement of the wedding, the night before it took place the couple's car was swiped by some dirty dog. That would have been bad enough, but to add to the woe, the car was stuffed full of wedding presents. Fine way to start married life.

"Joy," P&G's liquid detergent is now being test marketed in cans in Ohio, "Joy" will shortly appear nationally in metal cans, after all these years in glass.

Clear the way...



CLEAR the way for your salesmen, make it easier for them to sell. Give them the support of regular advertising in the business press, the books which are read by the people they call on. Now in the field of detergents and soaps, floor products, insecticides, disinfectants, areosol products, automotive chemicals and other chemical specialties, the one magazine which really can clear the way for your salesmen is

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